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NEWS 4 OCT 21 CA/CAPLUS kind code changes for Chinese patents increase consistency, save time
NEWS 5 OCT 22 New version of STN Viewer preserves custom highlighting of terms when patent documents are saved in .rtf format
NEWS 6 OCT 28 INPADOCDB/INPAFAMDB: Enhancements to the US national patent classification.
NEWS 7 NOV 03 New format for Korean patent application numbers in CA/CAPLUS increases consistency, saves time.
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NEWS 14 DEC 21 CAS Learning Solutions -- a new online training experience
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NEWS 16 JAN 24 The new and enhanced DPCI file on STN has been released
NEWS 17 JAN 26 Improved Timeliness of CAS Indexing Adds Value to USPATFULL and USPAT2 Chemistry Patents
NEWS 18 JAN 26 Updated MeSH vocabulary, new structured abstracts, and other enhancements improve searching in STN reload of MEDLINE
NEWS 19 JAN 28 CABA will be updated weekly
NEWS 20 FEB 23 PCTFULL file on STN completely reloaded
NEWS 21 FEB 23 STN AnaVist Test Projects Now Available for Qualified Customers
NEWS 22 FEB 25 LPCI will be replaced by LDPCI
NEWS 23 MAR 07 Pricing for SELECTING Patent, Application, and Priority Numbers in the USPAT and IFI Database Families is Now Consistent with Similar Patent Databases on STN

NEWS EXPRESS 17 DECEMBER 2010 CURRENT WINDOWS VERSION IS V8.4.2 .1, AND CURRENT DISCOVER FILE IS DATED 24 JANUARY 2011.

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***** STN Columbus *****

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| SINCE FILE | TOTAL |
|------------|---------|
| ENTRY | SESSION |
| 0.23 | 0.23 |

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FILE 'CAPLUS' ENTERED AT 20:28:36 ON 30 MAR 2011
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FILE 'BIOSIS' ENTERED AT 20:28:36 ON 30 MAR 2011
Copyright (c) 2011 The Thomson Corporation

=> antigen {s} {TRAIL-R3}
L1 6 ANTIGEN (S) (TRAIL-R3)

=> antigen {s} Sp1
L2 254 ANTIGEN (S) SP1

=> gene {w} therapy
L3 107698 GENE (W) THERAPY

=> DNA {w} vaccine
L4 13045 DNA (W) VACCINE

=> antigen {s} L4
L5 3109 ANTIGEN (S) L4

=> {TRAIL-R} and L5
L6 0 (TRAIL-R) AND L5

=> OX40 and L5
L7 3 OX40 AND L5

=> {Ap-1} and L4
L8 4 (AP-1) AND L4

=> RANK and L3
AND IS NOT VALID HERE
The term is either unrecognized or invalid.

=> L3 and RANK
L9 114 L3 AND RANK

=> antigen {s} L9
PROXIMITY OPERATOR LEVEL NOT CONSISTENT WITH
FIELD CODE - 'AND' OPERATOR ASSUMED 'ANTIGEN (S) L25'
PROXIMITY OPERATOR LEVEL NOT CONSISTENT WITH
FIELD CODE - 'AND' OPERATOR ASSUMED 'ANTIGEN (S) L26'
L10 18 ANTIGEN (S) L9

=> D L1 IBIIB AES 1-6
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L1 ANSWER 1 OF 6 CAPLUS COPYRIGHT 2011 ACS on STN

| Full Text | Citing References |
|----------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------|
| ACCESSION NUMBER: | 2009:1432065 CAPLUS |
| DOCUMENT NUMBER: | 152:284029 |
| TITLE: | Prognostic significance of tumour necrosis factor-related apoptosis-inducing ligand (TRAIL) receptor expression in patients with breast cancer |
| AUTHOR(S): | Ganten, Tom M.; Sykora, Jaromir; Koschny, Ronald; Batke, Emanuela; Aulmann, Sebastian; Mansmann, Ulrich; Stremmel, Wolfgang; Sinn, Hans-Peter; Walczak, Henning |
| CORPORATE SOURCE: | Division of Apoptosis Regulation (D040), German Cancer Research Center (DKFZ), Heidelberg, Germany |
| SOURCE: | Journal of Molecular Medicine (Heidelberg, Germany) (2009), 87(10), 995-1007 |
| PUBLISHER: | CODEN: JMLME8; ISSN: 0946-2716 |
| DOCUMENT TYPE: | Springer |
| LANGUAGE: | Journal |
| OS.CITING REF COUNT: | 2 THERE ARE 2 CAPLUS RECORDS THAT CITE THIS RECORD (2 CITINGS) |
| REFERENCE COUNT: | 45 THERE ARE 45 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT |

L1 ANSWER 2 OF 6 CAPLUS COPYRIGHT 2011 ACS on STN

| Full Text | Citing References |
|----------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| ACCESSION NUMBER: | 2008:288351 CAPLUS |
| DOCUMENT NUMBER: | 149:375256 |
| TITLE: | Tumor necrosis factor-related apoptosis inducing ligand-R4 decoy receptor expression is correlated with high Gleason scores, prostate-specific antigen recurrence, and decreased survival in patients with prostate carcinoma |
| AUTHOR(S): | Koksal, Ismail T.; Sanlioglu, Ahter D.; Karacay, Bahri; Griffith, Thomas S.; Sanlioglu, Salih |
| CORPORATE SOURCE: | Human Gene Therapy Unit and the Department of Medical Biology and Genetics, Faculty of Medicine, Akdeniz University, Antalya, Turk. |
| SOURCE: | Urologic Oncology: Seminars and Original Investigations (2008), 26(2), 158-165 |
| PUBLISHER: | CODEN: UOSOAA; ISSN: 1078-1439 |
| DOCUMENT TYPE: | Elsevier |
| LANGUAGE: | Journal |
| OS.CITING REF COUNT: | 7 THERE ARE 7 CAPLUS RECORDS THAT CITE THIS RECORD (7 CITINGS) |
| REFERENCE COUNT: | 30 THERE ARE 30 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT |

L1 ANSWER 3 OF 6 CAPLUS COPYRIGHT 2011 ACS on STN

| Full Text | Citing References |
|-------------------|--------------------------------------------------------|
| ACCESSION NUMBER: | 2007:1023171 CAPLUS |
| DOCUMENT NUMBER: | 147:371785 |
| TITLE: | Engineered antibody drug conjugates with defined sites |

and stoichiometries of drug attachment having cytotoxic activity against antigen-specific targets
 INVENTOR(S): McDonagh, Charlotte; Carter, Paul
 PATENT ASSIGNEE(S): Seattle Genetics, Inc., USA
 SOURCE: PCT Int. Appl., 149pp.
 CODEN: PIXXD2
 DOCUMENT TYPE: Patent
 LANGUAGE: English
 FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

| PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
|----------------------|------|----------|-----------------------|----------|
| <u>WO 2007103288</u> | A2 | 20070913 | <u>WO 2007-US5552</u> | 20070302 |
| <u>WO 2007103288</u> | A3 | 20071129 | | |

W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, GT, HN, HR, HU, ID, IL, IN, IS, JP, KE, KG, KM, KN, KP, KR, KZ, LA, LC, LK, LR, LS, LT, LU, LY, MA, MD, MG, MK, MN, MW, MX, MY, MZ, NA, NG, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RS, RU, SC, SD, SE, SG, SK, SL, SM, SV, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, ZA, ZM, ZW

RW: AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LT, LU, LV, MC, MT, NL, PL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG, BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AP, EA, EP, OA

PRIORITY APPLN. INFO.: US 2006-778472P P 20060302
US 2006-872348P P 20061201

OTHER SOURCE(S): MARPAT 147:371785

L1 ANSWER 4 OF 6 CAPLUS COPYRIGHT 2011 ACS on STN

Full Text 

ACCESSION NUMBER: 2004:1156439 CAPLUS
 DOCUMENT NUMBER: 142:73408
 TITLE: DNA vaccines comprising immunomodulatory proteins and antigen from pathogens
 INVENTOR(S): Weiner, David B.; Muthumani, Karupiah; Kutzler, Michele; Choo, Andrew K.; Chattergoon, Michael A.
 PATENT ASSIGNEE(S): The Trustees of the University of Pennsylvania, USA
 SOURCE: PCT Int. Appl., 47 pp.
 CODEN: PIXXD2
 DOCUMENT TYPE: Patent
 LANGUAGE: English
 FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

| PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
|----------------------|------|----------|------------------------|----------|
| <u>WO 2004112706</u> | A2 | 20041229 | <u>WO 2004-US19028</u> | 20040614 |
| <u>WO 2004112706</u> | A3 | 20050414 | | |

W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW

RW: BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK,

EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PL, PT, RO, SE,
SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE,
SN, TD, TG

| | | | | |
|--------------------------------------------------------------------|----|----------|------------------------|------------|
| <u>AU 2004249191</u> | A1 | 20041229 | <u>AU 2004-249191</u> | 20040614 |
| <u>AU 2004249191</u> | B2 | 20110106 | | |
| <u>CA 2529051</u> | A1 | 20041229 | <u>CA 2004-2529051</u> | 20040614 |
| <u>EP 1633372</u> | A2 | 20060315 | <u>EP 2004-755303</u> | 20040614 |
| R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, | | | | |
| IE, SI, FI, RO, CY, TR, BG, CZ, EE, HU, PL, SK | | | | |
| <u>JP 2007502868</u> | T | 20070215 | <u>JP 2006-533794</u> | 20040614 |
| <u>US 20070104686</u> | A1 | 20070510 | <u>US 2004-560653</u> | 20040614 |
| | | | <u>US 2003-478187P</u> | P 20030613 |
| | | | <u>US 2003-478230P</u> | P 20030613 |
| | | | <u>US 2003-478250P</u> | P 20030613 |
| | | | <u>WO 2004-US19028</u> | W 20040614 |

PRIORITY APPLN. INFO.:

ASSIGNMENT HISTORY FOR US PATENT AVAILABLE IN LSUS DISPLAY FORMAT
OS.CITING REF COUNT: 2 THERE ARE 2 CAPLUS RECORDS THAT CITE THIS RECORD
(3 CITINGS)
REFERENCE COUNT: 1 THERE ARE 1 CITED REFERENCES AVAILABLE FOR THIS
RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L1 ANSWER 5 OF 6 CAPLUS COPYRIGHT 2011 ACS on STN

| | | |
|----------------------|---------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------|
| Full Text | Citing References | |
| ACCESSION NUMBER: | 2000:583433 | CAPLUS |
| DOCUMENT NUMBER: | 134:146230 | |
| TITLE: | Expression of TRAIL receptors in human autoreactive and foreign antigen-specific T cells | |
| AUTHOR(S): | Wendling, U.; Walczak, H.; Dorr, J.; Jaboci, C.; Weller, M.; Krammer, P. H.; Zipp, F. | |
| CORPORATE SOURCE: | Division of Neuroimmunology, Department of Neurology, Charite, Berlin, Germany | |
| SOURCE: | Cell Death and Differentiation (2000), 7(7), 637-644 CODEN: CDDIEK; ISSN: 1350-9047 | |
| PUBLISHER: | Nature Publishing Group | |
| DOCUMENT TYPE: | Journal | |
| LANGUAGE: | English | |
| OS.CITING REF COUNT: | 40 | THERE ARE 40 CAPLUS RECORDS THAT CITE THIS RECORD (41 CITINGS) |
| REFERENCE COUNT: | 51 | THERE ARE 51 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT |

L1 ANSWER 6 OF 6 BIOSIS COPYRIGHT (c) 2011 The Thomson Corporation on STN

| | | |
|----------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------|
| Full Text | Citing References | |
| ACCESSION NUMBER: | 2000:399144 | BIOSIS |
| DOCUMENT NUMBER: | PREV200000399144 | |
| TITLE: | Expression of TRAIL receptors in human autoreactive and foreign antigen-specific T cells. | |
| AUTHOR(S): | Wendling, U.; Walczak, H.; Doerr, J.; Jaboci, C.; Weller, M.; Krammer, P. H.; Zipp, F. [Reprint author] | |
| CORPORATE SOURCE: | Department of Neurology, Division of Neuroimmunology, University Hospital Charite, Augustenburger Platz 1, Campus Virchow, Forschungshaus, 2.OG, R. 535, 13353, Berlin, Germany | |
| SOURCE: | Cell Death and Differentiation, (July, 2000) Vol. 7, No. 7, pp. 637-644. print. ISSN: 1350-9047. | |
| DOCUMENT TYPE: | Article | |
| LANGUAGE: | English | |

ENTRY DATE: Entered STN: 20 Sep 2000
Last Updated on STN: 8 Jan 2002

=> D 17 IRIS ABS 1-3

L7 ANSWER 1 OF 3 CAPLUS COPYRIGHT 2011 ACS on STN

| Full Text | Citing References |
|-------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| ACCESSION NUMBER: | 2007:859817 CAPLUS |
| DOCUMENT NUMBER: | 147:298670 |
| TITLE: | Enhanced protective efficacy and reduced viral load of foot-and-mouth disease DNA vaccine with co-stimulatory molecules as the molecular adjuvants |
| AUTHOR(S): | Xiao, Chong; Jin, Huali; Hu, Yanxin; Kang, Youmin; Wang, Junpeng; Du, Xiaogang; Yang, Yu; She, Ruiping; Wang, Bin |
| CORPORATE SOURCE: | State Key Laboratory for Agro-Biotechnology, Key Laboratory of Agro-Microbial Resources and Applications of MOA, China Agricultural University, Beijing, 100094, Peop. Rep. China |
| SOURCE: | Antiviral Research (2007), 76(1), 11-20 CODEN: ARSRDR; ISSN: 0166-3542 |
| PUBLISHER: | Elsevier B.V. |
| DOCUMENT TYPE: | Journal |
| LANGUAGE: | English |

AB To improve efficacy of DNA vaccination, various approaches have been developed, including the use of plasmid expressing co-stimulatory mols. as mol. adjuvants. Here, the authors investigated whether co-inoculation of a construct expressing either 4-1BBL or OX40L as the mol. adjuvant with FMDV DNA vaccine, pcD-VP1, can increase immune responses and protective efficacies. Compared to the group immunized with pcD-VP1 alone, the co-inoculation of either mol. adjuvant induced a higher ratio of IgG2a/IgG1, higher levels of expression of IFN- γ in CD4+ and CD8+ T cells and antigen-specific CTL responses, and more importantly provided an enhanced protection against the live FMDV challenge in animals. Concurrently, 4-1BBL as the mol. adjuvant dramatically reduced the viral loads of FMDV in vivo after the challenge. Thus, co-stimulatory mols. 4-1BBL and OX40L can enhance the **antigen**-specific cell-mediated responses elicited by VP1 **DNA vaccine** and provide an enhanced protective efficacy with the reduced viral loads.

OS.CITING REF COUNT: 9 THERE ARE 9 CAPLUS RECORDS THAT CITE THIS RECORD (9 CITINGS)
REFERENCE COUNT: 38 THERE ARE 38 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L7 ANSWER 2 OF 3 CAPLUS COPYRIGHT 2011 ACS on STN

| Full Text | Citing References |
|---------------------|-----------------------------------------------------------------------------------------------------|
| ACCESSION NUMBER: | 2004:1156439 CAPLUS |
| DOCUMENT NUMBER: | 142:73408 |
| TITLE: | DNA vaccines comprising immunomodulatory proteins and antigen from pathogens |
| INVENTOR(S): | Weiner, David B.; Muthumani, Karuppiiah; Kutzler, Michele; Choo, Andrew K.; Chattergoon, Michael A. |
| PATENT ASSIGNEE(S): | The Trustees of the University of Pennsylvania, USA |
| SOURCE: | PCT Int. Appl., 47 pp. CODEN: PIXXD2 |
| DOCUMENT TYPE: | Patent |
| LANGUAGE: | English |

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

| PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
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| <u>WO 2004112706</u> | A2 | 20041229 | <u>WO 2004-US19028</u> | 20040614 |
| <u>WO 2004112706</u> | A3 | 20050414 | | |
| W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MY, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW RW: BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG | | | | |
| <u>AU 2004249191</u> | A1 | 20041229 | <u>AU 2004-249191</u> | 20040614 |
| <u>AU 2004249191</u> | B2 | 20110106 | | |
| <u>CA 2529051</u> | A1 | 20041229 | <u>CA 2004-2529051</u> | 20040614 |
| <u>EP 1633372</u> | A2 | 20060315 | <u>EP 2004-755303</u> | 20040614 |
| R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, FI, RO, CY, TR, BG, CZ, EE, HU, PL, SK JP 2007502868 T 20070215 <u>JP 2006-533794</u> 20040614 US 20070104686 A1 20070510 <u>US 2004-560653</u> 20040614 <u>US 2003-478187P</u> P 20030613 <u>US 2003-478230P</u> P 20030613 <u>US 2003-478250P</u> P 20030613 <u>WO 2004-US19028</u> W 20040614 | | | | |

PRIORITY APPLN. INFO.:

ASSIGNMENT HISTORY FOR US PATENT AVAILABLE IN LSUS DISPLAY FORMAT

AB The authors disclose the use of recombinant vaccines and live attenuated pathogens comprising one or more isolated nucleic acid mols. that encode an immunogen in combination with an isolated nucleic acid mol. that encodes an immunomodulator protein selected from the group consisting of: Fos, c-jun, Sp-1, AP-1, AP-2, p38, p65Rel, MyD88, IRAK, TRAF6, IκB, inactive NIK, SAP kinase, SAP-1, JNK, interferon response genes, NF-κB, Bax, TRAIL, TRAIL receptors, DcR5, TRAIL-R3, TRAIL-R4, RANK, RANK ligand, **Ox40**, **Ox40** ligand, NKG2D, MICA, MICB, NKG2A, NKG2B, NKG2C, NKG2E, NKG2F, TAP1, TAP2 and functional fragments thereof.

OS.CITING REF COUNT: 2 THERE ARE 2 CAPLUS RECORDS THAT CITE THIS RECORD (3 CITINGS)

REFERENCE COUNT: 1 THERE ARE 1 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L7 ANSWER 3 OF 3 CAPLUS COPYRIGHT 2011 ACS on STN

| Full Text | Citing References |
|-----------|-------------------|
|-----------|-------------------|

ACCESSION NUMBER: 1998:684978 CAPLUS
 DOCUMENT NUMBER: 129:274700
 ORIGINAL REFERENCE NO.: 129:56017a,56020a
 TITLE: DNA encoding targeting protein fused to **antigen** or epitope in enhancement of immune response to **DNA vaccines**

INVENTOR(S): Boyle, Jefferey Stephen; Brady, Jamie Louise; Lew, Andrew Mark

PATENT ASSIGNEE(S): The Council of the Queensland Institute of Medical Research, Australia; Commonwealth Scientific and Industrial Research Organisation; The University of Melbourne; The Walter and Eliza Hall Institute of

SOURCE: Medical Research; CSL Ltd.
PCT Int. Appl., 64 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

| PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------|----------|------------------------|-------------|
| <u>WO 9844129</u> | A1 | 19981008 | <u>WO 1998-AU208</u> | 19980326 |
| W: AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CU, CZ, DE, DK, EE, ES, FI, GB, GE, GH, GM, GW, HU, ID, IL, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, UA, UG, US, UZ, VN, YU, ZW | | | | |
| RW: GH, GM, KE, LS, MW, SD, SZ, UG, ZW, AT, BE, CH, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, ML, MR, NE, SN, TD, TG | | | | |
| <u>CA 2285692</u> | A1 | 19981008 | <u>CA 1998-2285692</u> | 19980326 |
| <u>AU 9864902</u> | A | 19981022 | <u>AU 1998-64902</u> | 19980326 |
| <u>AU 728962</u> | B2 | 20010125 | | |
| <u>EP 972054</u> | A1 | 20000119 | <u>EP 1998-910530</u> | 19980326 |
| <u>EP 972054</u> | B1 | 20081210 | | |
| R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, FI | | | | |
| <u>NZ 500151</u> | A | 20010126 | <u>NZ 1998-500151</u> | 19980326 |
| <u>JP 2001522235</u> | T | 20011113 | <u>JP 1998-540989</u> | 19980326 |
| <u>JP 4382163</u> | B2 | 20091209 | | |
| <u>AT 417112</u> | T | 20081215 | <u>AT 1998-910530</u> | 19980326 |
| <u>ZA 9802608</u> | A | 19981008 | <u>ZA 1998-2608</u> | 19980327 |
| <u>US 20030035793</u> | A1 | 20030220 | <u>US 2002-185318</u> | 20020628 |
| <u>US 7423016</u> | B2 | 20080909 | | |
| <u>US 20030072742</u> | A1 | 20030417 | <u>US 2002-185799</u> | 20020628 |
| <u>US 7423023</u> | B2 | 20080909 | | |
| <u>CA 2489940</u> | A1 | 20060608 | <u>CA 2004-2489940</u> | 20041208 |
| PRIORITY APPLN. INFO.: | | | <u>AU 1997-5891</u> | A 19970327 |
| | | | <u>AU 1998-1830</u> | A 19980213 |
| | | | <u>WO 1998-AU208</u> | W 19980326 |
| | | | <u>US 2000-402020</u> | A1 20000328 |

ASSIGNMENT HISTORY FOR US PATENT AVAILABLE IN LSUS DISPLAY FORMAT

AB The present invention provides methods of enhancing the immune response to an immunogen and to comps. for use in these methods. In particular the present invention provides a DNA mol. for use in raising an immune response to an antigen. The DNA mol. includes a first sequence encoding a targeting mol., a second sequence encoding the antigen or an epitope thereof, and optionally a third sequence encoding a polypeptide which promotes dimerization or multimerization of the product encoded by the DNA mol. Immunization of mice with a no. of DNA sequences encoding CTLA4-antigen fusions enhanced the immune response to the antigen.

OS.CITING REF COUNT: 4 THERE ARE 4 CAPLUS RECORDS THAT CITE THIS RECORD (4 CITINGS)
REFERENCE COUNT: 8 THERE ARE 8 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

=> D L8 IEBB ABS 1-4

L8 ANSWER 1 OF 4 CAPLUS COPYRIGHT 2011 ACS on STN



ACCESSION NUMBER: 2007:284018 CAPLUS
 DOCUMENT NUMBER: 146:289496
 TITLE: Human herpesvirus-derived promoters for introducing gene into lymphocyte and application thereof
 INVENTOR(S): Takemoto, Masaya; Mori, Yasuko; Yamanishi, Koichi; Fuke, Isao; Gomi, Yasuyuki; Takahashi, Michiaki
 PATENT ASSIGNEE(S): The Research Foundation for Microbial Diseases of Osaka University, Japan
 SOURCE: PCT Int. Appl., 119pp.
 CODEN: PIXXD2
 DOCUMENT TYPE: Patent
 LANGUAGE: Japanese
 FAMILY ACC. NUM. COUNT: 1
 PATENT INFORMATION:

| PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------|----------|-------------------------|-------------|
| <u>WO 2007029712</u> | A1 | 20070315 | <u>WO 2006-JP317574</u> | 20060905 |
| W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HN, HR, HU, ID, IL, IN, IS, JP, KE, KG, KM, KN, KP, KR, KZ, LA, LC, LK, LR, LS, LT, LU, LV, LY, MA, MD, MG, MK, MN, MW, MX, MY, MZ, NA, NG, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RS, RU, SC, SD, SE, SG, SK, SL, SM, SV, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, ZA, ZM, ZW | | | | |
| RW: AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LT, LU, LV, MC, NL, PL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG, BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM | | | | |
| <u>AU 2006288279</u> | A1 | 20070315 | <u>AU 2006-288279</u> | 20060905 |
| <u>CA 2621917</u> | A1 | 20070315 | <u>CA 2006-2621917</u> | 20060905 |
| <u>EP 1932911</u> | A1 | 20080618 | <u>EP 2006-797474</u> | 20060905 |
| R: BE, DE, FR, GB, IT, NL | | | | |
| <u>CN 101300350</u> | A | 20081105 | <u>CN 2006-80041278</u> | 20060905 |
| <u>CN 101906418</u> | A | 20101208 | <u>CN 2010-10226760</u> | 20060905 |
| <u>IN 2008CN01631</u> | A | 20081226 | <u>IN 2008-CN1631</u> | 20080401 |
| <u>KR 2008036244</u> | A | 20080425 | <u>KR 2008-7007967</u> | 20080402 |
| <u>US 20100005536</u> | A1 | 20100107 | <u>US 2008-991637</u> | 20080716 |
| <u>US 20090208516</u> | A1 | 20090820 | <u>US 2008-195647</u> | 20080821 |
| <u>US 20090214579</u> | A1 | 20090827 | <u>US 2008-195665</u> | 20080821 |
| <u>PRIORITY APPLN. INFO.:</u> | | | <u>JP 2005-261366</u> | A 20050908 |
| | | | <u>CN 2006-80041278</u> | A3 20060905 |
| | | | <u>WO 2006-JP317574</u> | W 20060905 |
| | | | <u>US 2008-991637</u> | A3 20080716 |

ASSIGNMENT HISTORY FOR US PATENT AVAILABLE IN LSUS DISPLAY FORMAT

AB This invention relates to a promoter for inducing expression selectively and strongly in an immunocompetent cell and/or a blood cell such as a lymphocyte. It is based on a finding that HHV6 MIE promoter, HHV7 MIE promoter and HHV7 U95 promoter induce a specific expression in an immunocompetent cell and/or a blood cell such as a T lymphocyte. By utilizing the promoters, a selective delivery of a **DNA vaccine** or the like can be realized.

OS.CITING REF COUNT: 1 THERE ARE 1 CAPLUS RECORDS THAT CITE THIS RECORD (6 CITINGS)
 REFERENCE COUNT: 6 THERE ARE 6 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L8 ANSWER 2 OF 4 CAPLUS COPYRIGHT 2011 ACS on STN

| | |
|--------------|----------------------|
| Full Text | Citing References |
|--------------|----------------------|

ACCESSION NUMBER: 2004:1156439 CAPLUS
 DOCUMENT NUMBER: 142:73408
 TITLE: **DNA vaccines** comprising immunomodulatory proteins and antigen from pathogens
 INVENTOR(S): Weiner, David B.; Muthumani, Karuppiiah; Kutzler, Michele; Choo, Andrew K.; Chattergoon, Michael A.
 PATENT ASSIGNEE(S): The Trustees of the University of Pennsylvania, USA
 SOURCE: PCT Int. Appl., 47 pp.
 CODEN: PIXXD2
 DOCUMENT TYPE: Patent
 LANGUAGE: English
 FAMILY ACC. NUM. COUNT: 1
 PATENT INFORMATION:

| PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------|----------|------------------------|------------|
| <u>WO 2004112706</u> | A2 | 20041229 | <u>WO 2004-US19028</u> | 20040614 |
| <u>WO 2004112706</u> | A3 | 20050414 | | |
| W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW | | | | |
| RW: BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG | | | | |
| <u>AU 2004249191</u> | A1 | 20041229 | <u>AU 2004-249191</u> | 20040614 |
| <u>AU 2004249191</u> | B2 | 20110106 | | |
| <u>CA 2529051</u> | A1 | 20041229 | <u>CA 2004-2529051</u> | 20040614 |
| <u>EP 1633372</u> | A2 | 20060315 | <u>EP 2004-755303</u> | 20040614 |
| R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, FI, RO, CY, TR, BG, CZ, EE, HU, PL, SK | | | | |
| <u>JP 2007502868</u> | T | 20070215 | <u>JP 2006-533794</u> | 20040614 |
| <u>US 20070104686</u> | A1 | 20070510 | <u>US 2004-560653</u> | 20040614 |
| <u>PRIORITY APPLN. INFO.:</u> | | | <u>US 2003-478187P</u> | P 20030613 |
| | | | <u>US 2003-478230P</u> | P 20030613 |
| | | | <u>US 2003-478250P</u> | P 20030613 |
| | | | <u>WO 2004-US19028</u> | W 20040614 |

ASSIGNMENT HISTORY FOR US PATENT AVAILABLE IN LSUS DISPLAY FORMAT

AB The authors disclose the use of recombinant vaccines and live attenuated pathogens comprising one or more isolated nucleic acid mols. that encode an immunogen in combination with an isolated nucleic acid mol. that encodes an immunomodulator protein selected from the group consisting of: Fos, c-jun, Sp-1, AP-1, AP-2, p38, p65Rel, MyD88, IRAK, TRAF6, IκB, inactive NIK, SAP kinase, SAP-1, JNK, interferon response genes, NF-κB, Bax, TRAIL, TRAIL receptors, DcR5, TRAIL-R3, TRAIL-R4, RANK, RANK ligand, Ox40, Ox40 ligand, NKG2D, MICA, MICB, NKG2A, NKG2B, NKG2C, NKG2E, NKG2F, TAP1, TAP2 and functional fragments thereof.

OS.CITING REF COUNT: 2 THERE ARE 2 CAPLUS RECORDS THAT CITE THIS RECORD (3 CITINGS)

REFERENCE COUNT: 1 THERE ARE 1 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L8 ANSWER 3 OF 4 CAPLUS COPYRIGHT 2011 ACS on STN



ACCESSION NUMBER: 2004:794545 CAPLUS
 DOCUMENT NUMBER: 141:289084
 TITLE: Composition for inducing immunotolerance
 INVENTOR(S): Van Oosterhout, Antonius Josephus Maria; Kapsenberg, Martien Lukas; Weller, Frank Reinoud; Taher, Yousef Al-Madane; Lobato-Van Esch, Elisabeth Catharina Adriana Maria; Vissers, Joost Lambert Max
 PATENT ASSIGNEE(S): Universiteit Utrecht Holding B.V., Neth.
 SOURCE: Eur. Pat. Appl., 23 pp.
 CODEN: EPXXDW
 DOCUMENT TYPE: Patent
 LANGUAGE: English
 FAMILY ACC. NUM. COUNT: 1
 PATENT INFORMATION:

| PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------|----------|------------------------|-------------|
| <u>EP 1462111</u> | A1 | 20040929 | <u>EP 2003-75909</u> | 20030328 |
| R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR, BG, CZ, EE, HU, SK | | | | |
| <u>CA 2518793</u> | A1 | 20041007 | <u>CA 2004-2518793</u> | 20040325 |
| <u>WO 2004084927</u> | A2 | 20041007 | <u>WO 2004-NL205</u> | 20040325 |
| <u>WO 2004084927</u> | A3 | 20050127 | | |
| W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW | | | | |
| RW: BW, GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG | | | | |
| <u>EP 1608391</u> | A2 | 20051228 | <u>EP 2004-723429</u> | 20040325 |
| R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR, BG, CZ, EE, HU, PL, SK | | | | |
| <u>EP 1772152</u> | A2 | 20070411 | <u>EP 2006-77139</u> | 20040325 |
| <u>EP 1772152</u> | A3 | 20070627 | | |
| R: AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LI, LT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR | | | | |
| <u>EP 1842550</u> | A2 | 20071010 | <u>EP 2007-105399</u> | 20040325 |
| <u>EP 1842550</u> | A3 | 20081210 | | |
| R: AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LI, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR | | | | |
| <u>US 20060057154</u> | A1 | 20060316 | <u>US 2005-229333</u> | 20050915 |
| <u>PRIORITY APPLN. INFO.:</u> | | | <u>EP 2003-75909</u> | A 20030328 |
| | | | <u>EP 2004-723429</u> | A3 20040325 |
| | | | <u>WO 2004-NL205</u> | W 20040325 |

ASSIGNMENT HISTORY FOR US PATENT AVAILABLE IN LSUS DISPLAY FORMAT

AB The invention provides methods of treating allergic disorders and compns. for use therein. The methods comprise administering an allergen and one or more medicaments. These medicaments are compds. that inhibit the transcription of genes involved in the initiation of innate and specific immunity, thereby promoting the development of tolerance to these allergens, through inhibition of the NF- κ B and/or the MAPK/AP-1 signal transduction pathway(s). In another embodiment, the use of DNA vaccines is disclosed that incorporate a gene encoding one or more

allergen sequences or fragments thereof, in combination with genes encoding proteins that inhibit the activation of the NF- κ B and/or the MAPK/AP-1 pathway or in combination with small interfering RNA sequences or anti-sense sequences that inhibit the expression of NF- κ B and/or AP-1 proteins.

OS.CITING REF COUNT: 3 THERE ARE 3 CAPLUS RECORDS THAT CITE THIS RECORD (5 CITINGS)
REFERENCE COUNT: 1 THERE ARE 1 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L8 ANSWER 4 OF 4 CAPLUS COPYRIGHT 2011 ACS on STN

| Full Text | Citing References |
|----------------------------|------------------------------------------------------------------------|
| ACCESSION NUMBER: | 2002:946139 CAPLUS |
| DOCUMENT NUMBER: | 138:38057 |
| TITLE: | Chimeric antigens and vectors for targeted delivery in DNA vaccination |
| INVENTOR(S): | Valiante, Nicholas |
| PATENT ASSIGNEE(S): | Chiron S.p.A., Italy; Chiron S.r.L. |
| SOURCE: | PCT Int. Appl., 30 pp. CODEN: PIXXD2 |
| DOCUMENT TYPE: | Patent |
| LANGUAGE: | English |
| FAMILY ACC. NUM. COUNT: | 1 |
| <u>PATENT</u> INFORMATION: | |

| PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
|----------------------|------|----------|-----------------------|----------|
| <u>WO 2002098456</u> | A2 | 20021212 | <u>WO 2002-IB3105</u> | 20020530 |
| <u>WO 2002098456</u> | A3 | 20040506 | | |

W: US

RW: AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR

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|-------------------|----|----------|-----------------------|----------|
| <u>EP 1440156</u> | A2 | 20040728 | <u>EP 2002-751532</u> | 20020530 |
| <u>EP 1440156</u> | B1 | 20080827 | | |

R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, FI, CY, TR

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|-----------------------|----|----------|-----------------------|----------|
| <u>AT 406449</u> | T | 20080915 | <u>AT 2002-751532</u> | 20020530 |
| <u>US 20040147721</u> | A1 | 20040729 | <u>US 2003-479649</u> | 20031201 |
| <u>US 7541180</u> | B2 | 20090602 | | |
| <u>US 20100098718</u> | A1 | 20100422 | <u>US 2009-455444</u> | 20090601 |

PRIORITY APPLN. INFO.:

| | | |
|-----------------------|----|----------|
| <u>GB 2001-13798</u> | A | 20010606 |
| <u>WO 2002-IB3105</u> | W | 20020530 |
| <u>US 2003-479649</u> | A1 | 20031201 |

ASSIGNMENT HISTORY FOR US PATENT AVAILABLE IN LSUS DISPLAY FORMAT

AB The author discloses chimeric antigens comprising a dimer of first fusion protein with a second fusion protein. The fusion proteins comprise a targeting domain, a leucine zipper domain, and optionally an antigen for the second fusion protein.

OS.CITING REF COUNT: 1 THERE ARE 1 CAPLUS RECORDS THAT CITE THIS RECORD (1 CITINGS)
REFERENCE COUNT: 2 THERE ARE 2 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

=> D L18 IBIE ABS 1-18

L18 NOT FOUND

The L-number entered has not been defined in this session, or it has been deleted. To see the L-numbers currently defined in this session, enter DISPLAY HISTORY at an arrow prompt (= >).

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=> D L10 IETB ABS 1-19

L10 ANSWER 1 OF 18 CAPLUS COPYRIGHT 2011 ACS on STN

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| Full Text | Link References |
|--------------|--------------------|

ACCESSION NUMBER: 2009:1566750 CAPLUS
 DOCUMENT NUMBER: 152:67621
 TITLE: β -Adrenergic receptor agonists for the treatment
 of B-cell proliferative disorders
 INVENTOR(S): Rickles, Richard; Lee, Margaret S.
 PATENT ASSIGNEE(S): CombinatoRx, Inc., USA
 SOURCE: PCT Int. Appl., 111 pp.
 CODEN: PIXXD2
 DOCUMENT TYPE: Patent
 LANGUAGE: English
 FAMILY ACC. NUM. COUNT: 1
 PATENT INFORMATION:

| PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
|---------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------|-----------------|----------|
| WO 2009151569 | A2 | 20091217 | WO 2009-US3449 | 20090608 |
| WO 2009151569 | A3 | 20100225 | | |
| W: | AE, AG, AL, AM, AO, AT, AU, AZ, BA, BB, BG, BH, BR, BW, BY, BZ, CA, CH, CL, CN, CO, CR, CU, CZ, DE, DK, DM, DO, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, GT, HN, HR, HU, ID, IL, IN, IS, JP, KE, KG, KM, KN, KP, KR, KZ, LA, LC, LK, LR, LS, LT, LU, LY, MA, MD, ME, MG, MK, MN, MW, MX, MY, MZ, NA, NG, NI, NO, NZ, OM, PE, PG, PH, PL, PT, RO, RS, RU, SC, SD, SE, SG, SK, SL, SM, ST, SV, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, ZA, ZM, ZW | | | |
| RW: | AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HR, HU, IE, IS, IT, LT, LU, LV, MC, MK, MT, NL, NO, PL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG, BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AF, EA, EP, OA | | | |

US 20100099934 A1 20100114 US 2009-480034 20090608
 PRIORITY APPLN. INFO.: US 2008-60064E P 20080609
 ASSIGNMENT HISTORY FOR US PATENT AVAILABLE IN LSUS DISPLAY FORMAT

AB The invention discloses a method for treating a B-cell proliferative disorder by administering to a patient a β -Adrenergic receptor (BAR) agonist, e.g., formulated for administration by a route other than inhalation (such as for oral or i.v. administration), in an amt. effective to treat the B-cell proliferative disorder. The BAR agonist may be administered as a monotherapy or in combination with one or more other agents, e.g., a PDE inhibitor, an A2A receptor agonist, or an antiproliferative compd., in amts. that together are effective to treat the B-cell proliferative disorder. The invention further discloses pharmaceutical compns. and kits including a BAR agonist, alone or in combination with addnl. agents, for the treatment of a B-cell proliferative disorder.

L10 ANSWER 2 OF 18 CAPLUS COPYRIGHT 2011 ACS on STN

| | |
|--------------|--------------------|
| Full Text | Link References |
|--------------|--------------------|

ACCESSION NUMBER: 2009:86451 CAPLUS
 DOCUMENT NUMBER: 150:160095
 TITLE: Use of adenosine A2A receptor agonists and
 phosphodiesterase (PDE) inhibitors for the treatment
 of B-cell proliferative disorders, and combinations

with other agents
 INVENTOR(S): Rickles, Richard; Lee, Margaret S.
 PATENT ASSIGNEE(S): CombinatoRx, Incorporated, USA
 SOURCE: PCT Int. Appl., 70 pp.
 CODEN: PIXXD2
 DOCUMENT TYPE: Patent
 LANGUAGE: English
 FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

| PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------|----------|-----------------------|----------|
| <u>WO 2009011893</u> | A2 | 20090122 | <u>WO 2008-US8756</u> | 20080717 |
| <u>WO 2009011893</u> | A3 | 20090319 | | |
| W: AE, AG, AL, AM, AO, AT, AU, AZ, BA, BB, BG, BH, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DO, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, GT, HN, HR, HU, ID, IL, IN, IS, JP, KE, KG, KM, KN, KP, KR, KZ, LA, LC, LK, LR, LS, LT, LU, LY, MA, MD, ME, MG, MK, MN, MW, MX, MY, MZ, NA, NG, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RS, RU, SC, SD, SE, SG, SK, SL, SM, ST, SV, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, ZA, ZM, ZW RW: AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HR, HU, IE, IS, IT, LT, LU, LV, MC, MT, NL, NO, PL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG, BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AP, EA, EP, OA AU 2008276451 A1 20090122 AU 2008-276451 20080717 CA 2694983 A1 20090122 CA 2008-2694983 20080717 US 20090053168 A1 20090226 US 2008-175219 20080717 EP 2178369 A2 20100428 EP 2008-780231 20080717 R: AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HR, HU, IE, IS, IT, LI, LT, LU, LV, MC, MT, NL, NO, PL, PT, RO, SE, SI, SK, TR, AL, BA, MK, RS PRIORITY APPLN. INFO.: US 2007-950307P P 20070717 US 2007-965587P P 20070821 WO 2008-US8756 W 20080717 | | | | |

ASSIGNMENT HISTORY FOR US PATENT AVAILABLE IN LSUS DISPLAY FORMAT

AB The invention provides comps. and methods for the treatment of B-cell proliferative disorders that employ an A2A receptor agonist or one or more PDE inhibitors. The methods and comps. may further include an antiproliferative compd.

OS.CITING REF COUNT: 2 THERE ARE 2 CAPLUS RECORDS THAT CITE THIS RECORD (2 CITINGS)

L10 ANSWER 3 OF 18 CAPLUS COPYRIGHT 2011 ACS on STN

Full Text Citing Reference

ACCESSION NUMBER: 2007:932900 CAPLUS
 DOCUMENT NUMBER: 147:297111
 TITLE: Polynucleotides and polypeptide sequences involved in the process of bone remodeling
 INVENTOR(S): Sooknanan, Roy Rabindranauth; Tremblay, Gilles
 Bernard; Filion, Mario
 PATENT ASSIGNEE(S): Alethia Biotherapeutics Inc., Can.
 SOURCE: PCT Int. Appl., 203pp.
 CODEN: PIXXD2
 DOCUMENT TYPE: Patent
 LANGUAGE: English
 FAMILY ACC. NUM. COUNT: 2
PATENT INFORMATION:

| PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------|----------|----------------------|----------|
| <u>WO 2007093042</u> | A1 | 20070823 | <u>WO 2007-CA210</u> | 20070213 |
| W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, GT, HN, HR, HU, ID, IL, IN, IS, JP, KE, KG, KM, KN, KP, KR, KZ, LA, LC, LK, LR, LS, LT, LU, LV, LY, MA, MD, MG, MK, MN, MW, MX, MY, MZ, NA, NG, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RS, RU, SC, SD, SE, SG, SK, SL, SM, SV, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, ZA, ZM, ZW RW: AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LT, LU, LV, MC, NL, PL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG, BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM <u>AU 2007215334</u> A1 20070823 <u>AU 2007-215334</u> 20070213 <u>CA 2638823</u> A1 20070823 <u>CA 2007-2638823</u> 20070213 <u>EP 1994155</u> A1 20081126 <u>EP 2007-710624</u> 20070213 R: AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LI, LT, LU, LV, MC, NL, PL, PT, RO, SE, SI, SK, TR <u>JP 2009525730</u> T 20090716 <u>JP 2008-553592</u> 20070213 <u>US 20090298763</u> A1 20091203 <u>US 2009-279054</u> 20090113 <u>US 20100104575</u> A1 20100429 <u>US 2009-580943</u> 20091016 <u>US 2006-772585P</u> P 20060213 <u>US 2006-816858P</u> P 20060628 <u>WO 2007-CA210</u> W 20070213 <u>US 2009-279054</u> A2 20090113 | | | | |
| PRIORITY APPLN. INFO.: | | | | |

ASSIGNMENT HISTORY FOR US PATENT AVAILABLE IN LSUS DISPLAY FORMAT

AB This invention relates, in part, to unique and newly identified genetic polynucleotides involved in the process of bone remodeling, variants and derivs. of the polynucleotides and corresponding polypeptides, uses of the polynucleotides, polypeptides, variants and derivs., and methods and compns. for the amelioration of symptoms caused by bone remodeling disorders. Human polynucleotides were identified using macroarrays prepd. using RAMP amplified RNA from human precursor cells, differentiated intermediate and mature osteoclasts for four human donors, and 30 different normal human tissues. The RAW 264.7 osteoclast precursor cell line and human precursor cells (peripheral blood mononuclear cells or CD34-pos. progenitors) are well known in the art as murine and human models of osteoclastogenesis; human primary osteoclasts were differentiated from G-CSF-mobilized peripheral blood mononuclear cells in the presence of M-CSF and **RANK** ligand. Identification and validation of the polynucleotides involved in osteoclast activity confirms their potential as therapeutic targets and use uses for the amelioration of disease states and research purposes.

OS.CITING REF COUNT: 3 THERE ARE 3 CAPLUS RECORDS THAT CITE THIS RECORD (5 CITINGS)

REFERENCE COUNT: 4 THERE ARE 4 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L10 ANSWER 4 OF 18 CAPLUS COPYRIGHT 2011 ACS on STN

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| Full Text | Citing References |
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ACCESSION NUMBER: 2007:770027 CAPLUS

DOCUMENT NUMBER: 147:141447

TITLE: Canine receptor activator of NF- κ B ligand and methods for its preparation and use in treating conditions associated with loss of bone minerals

INVENTOR(S): Mattson, Jeanine D.; McClanahan, Terrill

PATENT ASSIGNEE(S): Schering-Plough Ltd., Switz.
 SOURCE: PCT Int. Appl., 59 pp.
 CODEN: PIXXD2
 DOCUMENT TYPE: Patent
 LANGUAGE: English
 FAMILY ACC. NUM. COUNT: 1
 PATENT INFORMATION:

| PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------|----------|------------------------|-------------|
| <u>WO 2004052233</u> | A2 | 20040624 | <u>WO 2003-US39292</u> | 20031210 |
| <u>WO 2004052233</u> | A3 | 20071206 | | |
| W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, HR, HU, ID, IL, IN, IS, JP, KG, KR, KZ, LC, LK, LR, LT, LU, LV, MA, MD, MG, MK, MN, MX, MZ, NI, NO, NZ, PG, PH, PL, PT, RO, RU, SC, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, US, UZ, VC, VN, YU, ZA, ZM RW: BW, GH, GM, KE, LS, MM, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG, AP, EA, EP, OA | | | | |
| <u>CA 2508773</u> | A1 | 20040624 | <u>CA 2003-2508773</u> | 20031210 |
| <u>JP 2006521084</u> | T | 20060921 | <u>JP 2004-558667</u> | 20031210 |
| <u>US 20060154858</u> | A1 | 20060713 | <u>US 2005-537864</u> | 20050607 |
| <u>US 7462700</u> | B2 | 20081209 | | |
| <u>US 20090148456</u> | A1 | 20090611 | <u>US 2008-266359</u> | 20081106 |
| <u>JP 2010042036</u> | A | 20100225 | <u>JP 2009-268156</u> | 20091125 |
| <u>PRIORITY APPLN. INFO.:</u> | | | <u>US 2002-432092P</u> | P 20021210 |
| | | | <u>JP 2004-558667</u> | A3 20031210 |
| | | | <u>WO 2003-US39292</u> | W 20031210 |
| | | | <u>US 2005-537864</u> | A3 20050607 |

ASSIGNMENT HISTORY FOR US PATENT AVAILABLE IN LSUS DISPLAY FORMAT

AB Nucleic acid mols. that encode a substantial part of canine receptor activator of NF- κ B ligand (RANKL) polypeptide are isolated from a canine splenocyte cDNA library, including the extracellular domains of the polypeptide, the full-length polypeptide, and fragments thereof. Vectors and host cells encoding and expressing canine RANKL polypeptide are provided, as well as rat monoclonal antibodies that bind to RANKL and that inhibit RANKL activity. Canine **RANK** may be used in methods of treating an animal to inhibit or treat the loss of bone minerals (no data).

L10 ANSWER 5 OF 18 CAPLUS COPYRIGHT 2011 ACS ON STN

Full Text Citing References

ACCESSION NUMBER: 2006:1329208 CAPLUS
 DOCUMENT NUMBER: 146:161275
 TITLE: HSV-1-mediated IL-1 receptor antagonist **gene therapy** ameliorates MOG35-55-induced experimental autoimmune encephalomyelitis in C57BL/6 mice
 AUTHOR(S): Furlan, R.; Bergami, A.; Brambilla, E.; Butti, E.; De Simoni, M. G.; Campagnoli, M.; Marconi, P.; Comi, G.; Martino, G.
 CORPORATE SOURCE: Neuroimmunology Unit, DIBIT, San Raffaele Scientific Institute, Milan, Italy
 SOURCE: Gene Therapy (2007), 14(1), 93-98
 CODEN: GETHEC; ISSN: 0969-7128
 PUBLISHER: Nature Publishing Group
 DOCUMENT TYPE: Journal

LANGUAGE: English

AB Primary proinflammatory cytokines, such as IL-1 β , play a crucial pathogenic role in multiple sclerosis and its animal model exptl. autoimmune encephalomyelitis (EAE), and may represent, therefore, a suitable therapeutic target. We have previously established the delivery of anti-inflammatory cytokine genes within the central nervous system (CNS), based on intracisternal (i.c.) injection of non-replicative HSV-1-derived vectors. Here we show the therapeutic efficacy of i.c. administration of an HSV-1-derived vector carrying the interleukin-1 receptor antagonist (IL-1ra) gene, the physiologic antagonist of the proinflammatory cytokine IL-1, in C57BL/6 mice affected by myelin oligodendrocyte glycoprotein-induced EAE. IL-1ra gene therapy is effective preventively, delaying EAE onset by almost 1 wk (22.4 \pm 1.4 days post-immunization vs 15.9 \pm 2.1 days in control mice; P=0.0229 log-rank test), and decreasing disease severity. Amelioration of EAE course was associated with a reduced number of macrophages infiltrating the CNS and in a decreased level of proinflammatory cytokine mRNA in the CNS, suggesting an inhibitory activity of IL-1ra on effector cell recruitment, as antigen-specific peripheral T-cell activation and T-cell recruitment to the CNS is unaffected. Thus, local IL-1ra gene therapy may represent a therapeutic alternative for the inhibition of immune-mediated demyelination of the CNS.

OS.CITING REF COUNT: 16 THERE ARE 16 CAPLUS RECORDS THAT CITE THIS RECORD (16 CITINGS)
 REFERENCE COUNT: 31 THERE ARE 31 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L10 ANSWER 6 OF 18 CAPLUS COPYRIGHT 2011 ACS on STN



ACCESSION NUMBER: 2006:735981 CAPLUS
 DOCUMENT NUMBER: 145:160139
 TITLE: Methods of modifying CD11c+ dendritic cell development to form osteoclasts functional in the bone environment
 INVENTOR(S): Teng, Yen-Tung A.
 PATENT ASSIGNEE(S): University of Rochester, USA
 SOURCE: PCT Int. Appl., 72 pp.
 CODEN: PIXXD2
 DOCUMENT TYPE: Patent
 LANGUAGE: English
 FAMILY ACC. NUM. COUNT: 1
 PATENT INFORMATION:

| PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
|---------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------|-----------------|----------|
| WO 2006079051 | A2 | 20060727 | WO 2006-US2397 | 20060124 |
| WO 2006079051 | A3 | 20070201 | | |
| W: | AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KM, KN, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, LY, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NG, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SM, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW | | | |
| RW: | AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LT, LU, LV, MC, NL, PL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG, BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM | | | |

US 20090028876 A1 20090129 US 2008-814515 20080416
 PRIORITY APPLN. INFO.: US 2005-646941P P 20050124
 WO 2006-023397 W 20060124

ASSIGNMENT HISTORY FOR US PATENT AVAILABLE IN LSUS DISPLAY FORMAT

AB An ex vivo method of producing osteoclasts is described that includes providing isolated CD11c+ dendritic cells and culturing the CD11c+ dendritic cells in culture medium under conditions effective to produce osteoclasts. Also disclosed are methods of up-regulating or down-regulating bone resorption by manipulating the osteoclastogenesis of CD11c+ dendritic cells either in vivo or in vitro. Methods of treating an inflammatory bone disease or a metabolic bone disorder in a subject, and screening assays to identify compds. or genes that affect myeloid osteoclastogenesis are also described.

REFERENCE COUNT: 1 THERE ARE 1 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L10 ANSWER 7 OF 18 CAPLUS COPYRIGHT 2011 ACS on STN



ACCESSION NUMBER: 2006:201658 CAPLUS
 DOCUMENT NUMBER: 145:186219
 TITLE: Osteosarcoma: current status of immunotherapy and future trends (Review)
 AUTHOR(S): Mori, Kanji; Redini, Francoise; Gouin, Francois; Cherrier, Bertrand; Heymann, Dominique
 CORPORATE SOURCE: INSERM ERI 7, Physiopathologie de la Resorption Osseuse et Therapie des Tumeurs Osseuses Primitives, Faculte de Medecine, Universite de Nantes EA 3822, Nantes, 44035/1, Fr.
 SOURCE: Oncology Reports (2006), 15(3), 693-700
 CODEN: OCRPEW; ISSN: 1021-335X
 PUBLISHER: Oncology Reports
 DOCUMENT TYPE: Journal; General Review
 LANGUAGE: English
 AB A review. Osteosarcoma is the most common primary bone tumor and represents a major therapeutic challenge in medical oncol. While the use of aggressive chemotherapy has drastically improved the prognosis of the patients with nonmetastatic osteosarcomas, the very poor prognosis of patients with metastasis have led to the exploration of new, more effective and less toxic treatments, such as immunotherapy for curing osteosarcoma. Compared to the numerous reports describing successful immunotherapy for other solid tumors, the no. of reports concerning immunotherapy for osteosarcoma is low. However, this therapeutic strategy opens new areas for the treatment of osteosarcoma. In this review, the reasons for delay and all elements essential to develop immunotherapy concerning osteosarcoma are defined. Several pieces of evidence strongly support the potential capability of new therapies such as cellular therapy and **gene therapy** to eradicate osteosarcoma. Thus, clin. human trials using peptides, cytokines and dendritic cells have been performed. Tumor-infiltrating lymphocytes and some tumor **antigens** have been identified in osteosarcoma and resulted in an important breakthrough in cellular immunotherapy. Also, RANKL/**RANK**/OPG, the key regulator of bone metab., is a hot spot in this field as therapeutic tools. Immunotherapy for osteosarcomas has great potential, promising improvement in the survival rate and better quality of life for the patients.

OS.CITING REF COUNT: 10 THERE ARE 10 CAPLUS RECORDS THAT CITE THIS RECORD (10 CITINGS)

REFERENCE COUNT: 102 THERE ARE 102 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L10 ANSWER 8 OF 18 CAPLUS COPYRIGHT 2011 ACS on STN



ACCESSION NUMBER: 2005:395470 CAPLUS
 DOCUMENT NUMBER: 142:442896
 TITLE: Methods for differentiating stem cells using a self-replicating neocentromeric artificial chromosome with chromatin domains expressing transgenes for **gene therapy**
 INVENTOR(S): Choo, Kong-Hong Andy; Wong, Lee Hwa; Saffery, Richard Eric
 PATENT ASSIGNEE(S): Murdoch Childrens Research Institute, Australia
 SOURCE: PCT Int. Appl., 168 pp.
 CODEN: PIXXD2
 DOCUMENT TYPE: Patent
 LANGUAGE: English
 FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

| PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
|---------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------|-----------------|----------|
| WO 2005040391 | A1 | 20050506 | WO 2004-AU1469 | 20041025 |
| W: | AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW | | | |
| RW: | BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG | | | |

PRIORITY APPLN. INFO.: AU 2003-905894 A 20031027

AB The present invention relates to the field of tissue engineering and genetic manipulation of cells and to methods for generating tissue suitable for use in repair, replacement, rejuvenation or augmentation therapy. The present invention contemplates a method for genetically manipulating a stem cell by introducing a nucleic acid mol. comprising a centromere or neo-centromere into the stem cell, wherein the nucleic acid mol. conveys genetic information which is capable of introducing to or modifying a trait within the stem cell or progeny of the stem cell such as but not limited to modulating the level of stem cell proliferation, differentiation and/or self-renewal. The neo-centromere is devoid of α -satellite repeat DNA. One aspect of the present invention provides a stem cell comprising a self-replicating artificial chromosome with a neo-centromere having centromeric chromatin domains comprising expressible genetic material which modifies or introduces at least one trait in said stem cell. Microarray gene expression profiles were conducted for human 10q25 centromeric region. The engineered stem cells may also be re-programmed, for example, to direct the cells down a different cell lineage.

OS.CITING REF COUNT: 3 THERE ARE 3 CAPLUS RECORDS THAT CITE THIS RECORD (3 CITINGS)
 REFERENCE COUNT: 3 THERE ARE 3 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L10 ANSWER 9 OF 18 CAPLUS COPYRIGHT 2011 ACS on STN



ACCESSION NUMBER: 2003:413999 CAPLUS
 DOCUMENT NUMBER: 139:2109
 TITLE: cDNAs encoding human endokine α and their use in diagnosis and treatment of metabolic bone diseases
 INVENTOR(S): Yu, Guo-Liang; Ni, Jian; Rosen, Craig A.; Nardelli, Bernardetta
 PATENT ASSIGNEE(S): Human Genome Sciences, Inc., USA
 SOURCE: U.S. Pat. Appl. Publ., 145 pp.
 CODEN: USXXCO
 DOCUMENT TYPE: Patent
 LANGUAGE: English
 FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

| PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------|----------|------------------------|------------|
| <u>US 20030100074</u> | A1 | 20030529 | <u>US 2002-218547</u> | 20020815 |
| <u>US 7087225</u> | B2 | 20060808 | | |
| <u>WO 2003070763</u> | A1 | 20030828 | <u>WO 2002-US25809</u> | 20020815 |
| W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, OM, PH, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG | | | | |
| <u>AU 2002366433</u> | A1 | 20030909 | <u>AU 2002-366433</u> | 20020815 |
| <u>PRIORITY</u> APPLN. INFO.: | | | | |
| | | | <u>US 2001-312542P</u> | P 20010816 |
| | | | <u>US 2001-330761P</u> | P 20011030 |
| | | | <u>WO 2002-US25809</u> | W 20020815 |

ASSIGNMENT HISTORY FOR US PATENT AVAILABLE IN LSUS DISPLAY FORMAT

AB The present invention concerns methods for diagnosis and treatment of metabolic bone diseases and disorders using a novel member of the tumor necrosis factor (TNF) family of cytokines. In particular the invention provides methods of using the Endokine alpha protein and/or homomultimeric and/or heteromultimeric polypeptide complexes contg. Endokine alpha, in the diagnosis, prognosis and treatment of metabolic bone diseases and disorders. Also provided by the invention are methods of using the Endokine alpha protein and/or homomultimeric and/or heteromultimeric polypeptide complexes contg. Endokine alpha, in the diagnosis, prognosis and treatment of diseases and/or disorders assocd. with aberrant osteoclast development and/or activity. The present invention also provides isolated polynucleotides encoding polypeptides of the invention, antibodies thereto, and agonists and antagonists thereof, for use in the diagnosis, prognosis and treatment of metabolic bone diseases and disorders.

REFERENCE COUNT: 48 THERE ARE 48 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L10 ANSWER 10 OF 18 CAPLUS COPYRIGHT 2011 ACS on STN



ACCESSION NUMBER: 2002:966944 CAPLUS
 DOCUMENT NUMBER: 138:37611
 TITLE: **Gene therapy** approaches to HIV infection

AUTHOR(S): Lori, Franco; Guallini, Paola; Galluzzi, Luca; Lisiewicz, Julianna

CORPORATE SOURCE: Research Institute for Genetic and Human Therapy, IRCCS Policlinico S. Matteo, Pavia, Italy

SOURCE: American Journal of Pharmacogenomics (2002), 2(4), 245-252
CODEN: AJPMC8; ISSN: 1175-2203

PUBLISHER: Adis International Ltd.

DOCUMENT TYPE: Journal; General Review

LANGUAGE: English

AB A review. The HIV pandemic represents a new challenge to biomedical research. What began as a handful of recognized cases among homosexual men in the US has become a global pandemic of such proportions that it clearly **rank**s as one of the most destructive viral scourges in history. In the past few years new treatments and drugs have been developed and tested, but the development of a new generation of therapies remains a major priority, because of the lack of chemotherapeutic drugs or vaccines that show long-term efficacy in vivo. Recently, gene therapeutic strategies for the treatment of patients with HIV infection have received increased attention because they are able to offer the possibility of simultaneously targeting multiple sites in the HIV genome, thereby minimizing the prodn. of resistant virus. Recombinant genes for **gene therapy** can be classified as expressing interfering proteins (intracellular antibodies, dominant neg. proteins) or interfering RNAs (antisense RNAs, ribozymes, RNA decoys). The latter group offers the advantage of avoiding the stimulation of host immune response which might progressively decrease the efficacy of proteins. The stumbling block to achieving lasting antiviral effects is still represented by the lack of efficient gene transfer techniques capable of generating persistent transgene expression and a high no. of transduced cells relative to untransduced cells. Novel delivery vectors, such as lentiviruses, might overcome some of these shortcomings. The use of recombinant genes to generate immunity is a very promising concept that is rapidly expanding. Since the immune system can significantly amplify the response to tiny amts. of **antigen**, DNA vaccines can indeed be delivered by exploiting traditional **gene therapy** approaches without the need of high transduction efficiency.

OS.CITING REF COUNT: 12 THERE ARE 12 CAPLUS RECORDS THAT CITE THIS RECORD (12 CITINGS)

REFERENCE COUNT: 77 THERE ARE 77 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L10 ANSWER 11 OF 18 CAPLUS COPYRIGHT 2011 ACS on STN

Full
Text

Citing
References

ACCESSION NUMBER: 2001:228744 CAPLUS

DOCUMENT NUMBER: 134:247267

TITLE: Clostridial neurotoxin targeted conjugates for inhibition of secretion from non-neuronal cells

INVENTOR(S): Foster, Keith Alan; Chaddock, John Andrew; Purkiss, John Robert; Quinn, Conrad Padraig

PATENT ASSIGNEE(S): Microbiological Research Authority, UK

SOURCE: PCT Int. Appl., 63 pp.
CODEN: PIXXD2

DOCUMENT TYPE: Patent

LANGUAGE: English

FAMILY ACC. NUM. COUNT: 2

PATENT INFORMATION:

| PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
|------------|------|------|-----------------|------|
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|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----|----------|------------------------|----------|
| <u>WO 2001021213</u> | A2 | 20010329 | <u>WO 2000-GB3669</u> | 20000925 |
| <u>WO 2001021213</u> | A3 | 20020711 | | |
| W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CR, CU, CZ, DE, DK, DM, DZ, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, UZ, VN, YU, ZA, ZW | | | | |
| RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG | | | | |
| <u>CA 2383470</u> | A1 | 20010329 | <u>CA 2000-2383470</u> | 20000925 |
| <u>EP 12335594</u> | A2 | 20020904 | <u>EP 2000-962721</u> | 20000925 |
| R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL | | | | |
| <u>JP 2003509476</u> | T | 20030311 | <u>JP 2001-524636</u> | 20000925 |
| <u>AU 782457</u> | B2 | 20050728 | <u>AU 2000-74365</u> | 20000925 |
| <u>EP 2110142</u> | A2 | 20091021 | <u>EP 2009-157032</u> | 20000925 |
| R: AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LI, LU, MC, NL, PT, SE, AL, LT, LV, MK, RO, SI | | | | |
| <u>US 20030180289</u> | A1 | 20030925 | <u>US 2002-88665</u> | 20020814 |
| <u>AU 2005227383</u> | A1 | 20051124 | <u>AU 2005-227383</u> | 20051027 |
| <u>AU 2005227383</u> | B2 | 20080821 | | |
| <u>AU 2008241572</u> | A1 | 20081127 | <u>AU 2008-241572</u> | 20081031 |
| <u>AU 2008241572</u> | B2 | 20110127 | | |

PRIORITY APPLN. INFO.:

| | | |
|-----------------------|----|----------|
| <u>GB 1999-22554</u> | A | 19990923 |
| <u>EP 2000-962721</u> | A3 | 20000925 |
| <u>WO 2000-GB3669</u> | W | 20000925 |
| <u>AU 2005-227383</u> | A3 | 20051027 |

ASSIGNMENT HISTORY FOR US PATENT AVAILABLE IN LSPUS DISPLAY FORMAT

AB A method of treatment of disease by inhibition of cellular secretory processes is provided. The method has particular application in the treatment of diseases dependent on the exocytotic activity of endocrine cells, exocrine cells, inflammatory cells, cells of the immune system, cells of the cardiovascular system, and bone cells. Agents and compns. therefor, as well as methods for manufg. these agents and compns., are provided. In a preferred embodiment a clostridial neurotoxin, substantially devoid of holotoxin binding affinity for neuronal cells of the presynaptic muscular junction, is assocd. with a targeting moiety. The targeting moiety is selected such that the clostridial toxin conjugate so formed may be directed to a non-neuronal target cell to which the conjugate may bind. Following binding, a neurotoxin component of the conjugate, which is capable of inhibition of cellular secretion, passes into the cytosol of the target cell by cellular internalization mechanisms. Thereafter, inhibition of secretion from the target cell is effected.

OS.CITING REF COUNT: 5 THERE ARE 5 CAPLUS RECORDS THAT CITE THIS RECORD (5 CITINGS)

REFERENCE COUNT: 8 THERE ARE 8 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L10 ANSWER 12 OF 18 CAPLUS COPYRIGHT 2011 ACS on STN

| Full Text | Citing References |
|-------------------|------------------------------------------------------------------------------------|
| ACCESSION NUMBER: | 2000:452056 CAPLUS |
| DOCUMENT NUMBER: | 134:98284 |
| TITLE: | Isolation and characterization of CD34-low/negative mouse hematopoietic stem cells |
| AUTHOR(S): | Nakauchi, Hiromitsu; Osawa, Masatake; Sudo, Kazuhiro; |

CORPORATE SOURCE: Ema, Hideo
 Institute of Basic Medical Sciences and Center for
 TARA, University of Tsukuba, Tsukuba, 305-8575, Japan
 SOURCE: Keio University Symposia for Life Science and Medicine
 (2000), 5(Cell Therapy), 95-103
 CODEN: KUSMF9
 PUBLISHER: Springer-Verlag Tokyo
 DOCUMENT TYPE: Journal; General Review
 LANGUAGE: English

AB A review with 16 refs. with an emphasis on the authors' research. We have previously reported that, in adult mouse bone marrow, CD34low/- c-Kit+ Sca-1+ lineage markers neg. (Lin-) (CD34-KSL) cells represent hematopoietic stem cells with long-term marrow repopulating ability whereas CD34+ c-Kit+ Sca-1+ Lin- (CD34+KSL) cells are progenitors with short-term reconstitution capacity. To characterize these two populations of cells further, relative expression of various genes was examd. by RT-PCR. In CD34-KSL cells, most cytokine receptor genes were not expressed with the exception of IL2R γ and AIC-2B. In contrast, expression of all cytokine receptor genes examd. except IL-2R α , IL-7R α , and IL9R α chains were found in CD34+KSL cells. Cell cycle studies revealed only 3% of CD34-KSL cells and 26% of CD34-KSL cells are dividing at a given time. Long-term BrdU administration study demonstrated, however, that majority of CD34-KSL cells contribute to hemopoiesis by dividing very slowly. Furthermore, anal. of aged mice revealed more than tenfold increase in abs. no. of CD34-KSL cells. Those CD34-KSL cells in aged mice appeared to include HPP-CFC at an equiv. frequency with those in younger mice. These data support our previous notion that CD34-KSL cells are at higher rank in hematopoietic hierarchy than CD34+KSL cells. In addn., our results provide important clues for cell therapy and **gene therapy** targeting hematopoietic stem cells.

REFERENCE COUNT: 16 THERE ARE 16 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L10 ANSWER 13 OF 18 CAPLUS COPYRIGHT 2011 ACS on STN



ACCESSION NUMBER: 2000:111338 CAPLUS
 DOCUMENT NUMBER: 132:121345
 TITLE: Treatment of established tumor is associated with ICAM-1 upregulation and reversed by CD8 depletion in a tumor necrosis factor-alpha gene transfected mouse mammary tumor
 AUTHOR(S): Matory, Yvett L.; Dorfman, David M.; Wu, Lei; Chen, Man; Goedegebuure, Peter; Eberlein, Timothy J.
 CORPORATE SOURCE: Harvard Medical School, Brigham Women's Hospital, Boston, MA, 02115, USA
 SOURCE: Pathobiology (2000), 67(4), 186-195
 CODEN: PATHEF; ISSN: 1015-2008
 PUBLISHER: S. Karger AG
 DOCUMENT TYPE: Journal
 LANGUAGE: English

AB We have performed TNF- α gene transfection in a mouse mammary cancer line and found significant antitumor effects. We hypothesize that the antitumor effects obsd. in this model are mediated by ICAM-1 and by the recruitment of CD4+ and CD8+ T cells. In vivo (Balb/c mice) tumor growth inhibition, treatment of established tumor and the effects of ICAM-1 and CD4+ and CD8+ T cells were evaluated. Gene transfection with highly efficient vectors resulted in secretion of large amts. of TNF- α (ELISA). In vivo anti-tumor effects were tested. The no. of cells required to generate palpable tumor 7-10 days after s.c. injection was

detd. (1 × 106). The same no. of transfected cells were injected s.c. and compared to nontransfected controls. Tumors were measured blindly and size was analyzed on day 30 by the Wilcoxon **rank** sum test. Mean tumor size after injection of transfected cells is compared to that of controls. Control tumors reached the max. allowable size by day 30 (4 cm2). On day 30 EMT6-TNF-α tumors were 0.48 cm2. The effect of repeat injection was also tested. Animals were injected with transfected cells or wild-type control on day-6 and challenged with the same no. of wild-type tumor cells on day 0. Significant immune protection against subsequent challenge was seen after 1st time injection with EMT6-TNF-α but not after 1st time EMT6 wild-type injection (1.62 vs. 4 cm2). Treatment of 6-day-old tumor was also evaluated. On day 30, mean tumor size in animals treated with EMT6-TNF-α was 0.9 cm2 compared to 4 cm2 for controls. In all expts., CD8+ T cell depletion and CD4+ T cell depletion caused a reversal of TNF-α-induced inhibitory effects. In addn., in vivo antibody blocking of ICAM-1 in tumor growth expts. reversed antitumor effects (control 4 cm2, TNF-α 0.2 cm2, and ICAM-1 blocking 3.14 cm2). Using flow cytometry, MHC class I and II and ICAM-1 adhesion mol. expression of transfected tumor was tested. ICAM-I expression was significantly upregulated. MHC class II **antigen** expression was also increased. TNF-α-transfected human breast cancer was also evaluated. 3 Cell lines and fresh tumor were transfected to express TNF-α. In vitro anal. revealed ICAM-1 upregulation following transfection. Histol. anal. and immunohistochem. staining revealed TNF-α and ICAM-1 in transfected tumors and not in wild-type tumors. Highly significant in vivo tumor growth inhibition and immune protection after injection with TNF-α-transfected tumors appears to be mediated predominantly by CD8+ T cells and ICAM-1 upregulation. These findings suggest that TNF-α increases recruitment and adhesion of effector T cells.

REFERENCE COUNT: 47 THERE ARE 47 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

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STN

ACCESSION NUMBER: 2008:155958 BIOSIS
DOCUMENT NUMBER: PREV200800161746
TITLE: HSV-1-mediated IL-1 receptor antagonist **gene therapy** ameliorates MOG(35-55)-induced experimental autoimmune encephalomyelitis in C57BL/6 mice.
AUTHOR(S): Furlan, R. [Reprint Author]; Bergami, A.; Brambilla, E.; Butti, E.; De Simoni, M. G.; Campagnoli, M.; Marconi, P.; Comi, G.; Martino, G.
CORPORATE SOURCE: San Raffaele Sci Inst, Neuroimmunol Unit, DIBIT, Via Olgettina 58, I-20132 Milan, Italy
furlan.roberto@hsr.it
SOURCE: Gene Therapy, (JAN 2007) Vol. 14, No. 1, pp. 93-98. ISSN: 0969-7128.
DOCUMENT TYPE: Article
LANGUAGE: English
ENTRY DATE: Entered STN: 5 Mar 2008
Last Updated on STN: 5 Mar 2008
AB Primary proinflammatory cytokines, such as IL-1 beta, play a crucial pathogenic role in multiple sclerosis and its animal model experimental autoimmune encephalomyelitis (EAE), and may represent, therefore, a suitable therapeutic target. We have previously established the delivery of anti-inflammatory cytokine genes within the central nervous system (CNS), based on intracisternal (i.c.) injection of non-replicative

HSV-1-derived vectors. Here we show the therapeutic efficacy of i.c. administration of an HSV-1-derived vector carrying the interleukin-1receptor antagonist (IL-1ra) gene, the physiological antagonist of the proinflammatory cytokine IL-1, in C57BL/6 mice affected by myelin oligodendrocyte glycoprotein-induced EAE. IL-1ra **gene therapy** is effective preventively, delaying EAE onset by almost 1 week (22.4 +/- 1.4 days post-immunization vs 15.9 +/- 2.1 days in control mice; $P = 0.0229$ log-rank test), and decreasing disease severity. Amelioration of EAE course was associated with a reduced number of macrophages infiltrating the CNS and in a decreased level of proinflammatory cytokine mRNA in the CNS, suggesting an inhibitory activity of IL-1ra on effector cell recruitment, as **antigen**-specific peripheral T-cell activation and T-cell recruitment to the CNS is unaffected. Thus, local IL-1ra **gene therapy** may represent a therapeutic alternative for the inhibition of immune-mediated demyelination of the CNS.

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| Full Text | CITIP References |
|--------------|---------------------|

STN

ACCESSION NUMBER: 2006:265332 BIOSIS
DOCUMENT NUMBER: PREV200600268984
TITLE: Osteosarcoma: Current status of immunotherapy and future trends (Review).
AUTHOR(S): Mori, Kanji [Reprint Author]; Redini, Francoise; Gouin, Frans; Cherrier, Bertrand; Heymann, Dominique
CORPORATE SOURCE: Univ Nantes, Fac Med, EA 3822, INSERM ERI 7, 1 Rue Gaston Veil, F-44035 Nantes 1, France
kanchi@belle.shiga-med.ac.jp
SOURCE: Oncology Reports, (MAR 2006) Vol. 15, No. 3, pp. 693-700. ISSN: 1021-335X.
DOCUMENT TYPE: Article
LANGUAGE: English
ENTRY DATE: Entered STN: 10 May 2006
Last Updated on STN: 10 May 2006

AB Osteosarcoma is the most common primary bone tumor and represents a major therapeutic challenge in medical oncology. While the use of aggressive chemotherapy has drastically improved the prognosis of the patients with non-metastatic osteosarcomas, the very poor prognosis of patients with metastasis have led to the exploration of new, more effective and less toxic treatments, such as immunotherapy for curing osteosarcoma. Compared to the numerous reports describing successful immunotherapy for other solid tumors, the number of reports concerning immunotherapy for osteosarcoma is low. However, this therapeutic strategy opens new areas for the treatment of osteosarcoma. In this review, the reasons for delay and all elements essential to develop immunotherapy concerning osteosarcoma are defined. Several pieces of evidence strongly support the potential capability of new therapies such as cellular therapy and **gene therapy** to eradicate osteosarcoma. Thus, clinical human trials using peptides, cytokines and dendritic cells have been performed. Tumor-infiltrating lymphocytes and some tumor **antigens** have been identified in osteosarcoma and resulted in an important breakthrough in cellular immunotherapy. Also, RANKL/**RANK**/OPG, the key regulator of bone metabolism, is a hot spot in this field as therapeutic tools. Immunotherapy for osteosarcomas has great potential, promising improvement in the survival rate and better quality of life for the patients.

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STN

ACCESSION NUMBER: 2002:459629 BIOSIS
 DOCUMENT NUMBER: PREV200200459629
 TITLE: Interleukin-12-gene transduction makes DCs from tumor-bearing mice an effective inducer of tumor-specific immunity in a peritoneal dissemination model.
 AUTHOR(S): Furumoto, Katsuyoshi [Reprint author]; Mori, Akira; Yamasaki, Seiji; Inoue, Naoya; Yang, Weige; Nakau, Masayuki; Yasuda, Seichi; Arai, Shigeki; Imamura, Masayuki
 CORPORATE SOURCE: Department of Surgery and Surgical Basic Science, Graduate School of Medicine, Kyoto University, 54 Shogoin Kawara-cho, Sakyo-ku, Kyoto, 606-8507, Japan furumoto@stanford.edu
 SOURCE: Immunology Letters, (August 1, 2002) Vol. 83, No. 1, pp. 13-20. print.
 CODEN: IMLED6. ISSN: 0165-2478.
 DOCUMENT TYPE: Article
 LANGUAGE: English
 ENTRY DATE: Entered STN: 28 Aug 2002
 Last Updated on STN: 28 Aug 2002

AB Dendritic cells (DCs) from cancer patients, as well as tumor-infiltrating DCs, are reported to have suppressed immunostimulatory capacity. One of the major problems in the clinical use of DCs for treating tumors is that the DCs must be autologous ones obtained from patients. Compared with normal DCs (nDCs), flow-cytometric analysis and allogeneic mixed lymphocyte reaction (MLR) have revealed lower expression of the costimulatory molecules and suppressed T-cell-stimulatory activity in DCs derived from tumor-bearing mice (tDCs) despite of culture. We reported previously that the interleukin-12 (IL-12)-gene-transduced nDCs inhibited tumor growth due to induced tumor-specific Th1 and cytotoxic T cells (CTLs) in a murine established subcutaneous tumor model. In the present study, we examined whether tDCs could induce immune responses against tumors after IL-12-gene transduction in an established peritoneal dissemination model. The intraperitoneal injection of IL-12-gene-transduced tDCs resulted in prolonged survival of some treated mice (log-rank test; $P = 0.001$) and tumor-specific Th1 and CTL activity. The injection of IL-12-gene-transduced nDCs prolonged the survival of all treated mice ($P < 0.0001$) and elicited tumor-specific immunity, which were better than those of IL-12-gene-transduced tDCs. Taken together, DC modification of IL-12-gene transduction is an effective and promising approach for cancer therapy even when immunosuppressive tDCs are employed.

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STN

ACCESSION NUMBER: 2000:256574 BIOSIS
 DOCUMENT NUMBER: PREV200000256574
 TITLE: The liver as a life-guard.
 AUTHOR(S): Ramadori, Giuliano [Reprint author]; Armbrust, Thomas
 CORPORATE SOURCE: Center of Internal Medicine, Department of Gastroenterology and Endocrinology, Georg-August-University, Robert-Koch-Strasse 40, 37075, Goettingen, Germany
 SOURCE: Giornale Italiano di Malattie Infettive, (July-Aug., 1999) Vol. 5, No. 4, pp. 209-216. print.
 ISSN: 1126-9952.
 DOCUMENT TYPE: Article
 General Review; (Literature Review)

LANGUAGE: English
 ENTRY DATE: Entered STN: 21 Jun 2000
 Last Updated on STN: 5 Jan 2002

AB Clearance of endogenous or foreign, soluble or particulate matter may **rank** as the most important 'every day' defense strategy of the liver involving as many as three different cell populations within that organ (KC, EC, HC). With the gut in the back the presence of the, by far, largest population of resident tissue macrophages indicates the need for a strong and efficient clearance of foreign material preventing their entry into systemic circulation. The capacity of KC to release a broad spectrum of powerful molecules in the state of activation may **rank** as part of this function since endocytosis is the main mechanism of KC activation. Beneath clearance, the liver is providing much more that seems to be essential in defense. The acute phase response, the systemic alterations seen in infection, tissue damage or other inflammatory reactions, to a major extent, can be induced, mediated or executed by the liver. Although not completely understood the acute phase response is suggested to ease the resolution of those pathological states. Another constitutive action of the liver is the oral tolerance, the suppression of the immune response to portal **antigens**. It is likely that this phenomenon mediated by active suppression is essential in preventing hyperresponsiveness to foreign material (food components) and endogenous molecules shed from gut cells and reaching the blood stream. Oral tolerance seems to be suited to enable development of new strategies in fighting diseases. It gained new actuality in **gene therapy**. Gene delivery by adenoviruses is limited by a strong immune response against adenoviral **antigens**, but oral administration of adenoviral **antigens** can sustain efficient expression of the transferred genes.

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| Full Text | Cited References |
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STN

ACCESSION NUMBER: 2000:133734 BIOSIS

DOCUMENT NUMBER: PREV200000133734

TITLE: Treatment of established tumor is associated with ICAM-1 upregulation and reversed by CD8 depletion in a tumor necrosis factor-alpha gene transfected mouse mammary tumor.
 AUTHOR(S): Matory, Yvedt L. [Reprint author]; Dorfman, David M.; Wu, Lei; Chen, Man; Goedegebuure, Peter; Eberlein, Timothy J.

CORPORATE SOURCE: Brigham and Women's Hospital, 75 Francis Street, Boston, MA, 02115, USA

SOURCE: Pathobiology, (July-Aug., 1999) Vol. 67, No. 4, pp. 186-195, print.

CODEN: PATHEF. ISSN: 1015-2008.

DOCUMENT TYPE: Article

LANGUAGE: English

ENTRY DATE: Entered STN: 12 Apr 2000

Last Updated on STN: 4 Jan 2002

AB Introduction: We have performed TNF-alpha gene transfection in a mouse mammary cancer line and found significant antitumor effects. We hypothesize that the antitumor effects observed in this model are mediated by ICAM-1 and by the recruitment of CD4+ and CD8+ T cells. In vivo (Balb/c mice) tumor growth inhibition, treatment of established tumor and the effects of ICAM-1 and CD4+ and CD8+ T cells were evaluated. Methods and Results: Gene transfection with highly efficient vectors resulted in secretion of large amounts of TNF-alpha (ELISA). In vivo anti-tumor effects were tested. The number of cells required to generate palpable tumor 7-10 days after subcutaneous injection was determined (1 X 10⁶). The same number of transfected cells were injected subcutaneously and

compared to nontransfected controls. Tumors were measured blindly and size was analyzed on day 30 by the Wilcoxon **rank** sum test. Mean tumor size after injection of transfected cells is compared to that of controls. Control tumors reached the maximum allowable size by day 30 (4 cm²). On day 30 EMT6-TNF-alpha tumors were 0.48 cm² (p < 0.05). The effect of repeat injection (challenge was also tested). Animals were injected with transfected cells or wild-type control on day-6 and challenged with the same number of wild-type tumor cells on day 0. Significant immune protection against subsequent challenge was seen after first time injection with EMT6-TNF-alpha but not after first time EMT6 wild-type injection (1.62 vs. 4 cm²). Treatment of 6-day-old tumor was also evaluated. On day 30, mean tumor size in animals treated with EMT6-TNF-alpha was 0.9 cm² compared to 4 cm² for controls. In all experiments, CD8+ T cell depletion and CD4+ T cell depletion caused a reversal of TNF-alpha-induced inhibitory effects. In addition, in vivo antibody blocking of ICAM-1 in tumor growth experiments reversed antitumor effects (control 4 cm², TNF-alpha 0.2 cm² and ICAM-1 blocking 3.14 cm²). Using flow cytometry, MHC class I and II and ICAM-1 adhesion molecule expression of transfected tumor was tested. ICAM-1 expression was significantly upregulated. MHC class II **antigen** expression was also increased. TNF-alpha-transfected human breast cancer was also evaluated. Three cell lines and fresh tumor were transfected to express TNF-alpha. In vitro analysis revealed ICAM-1 upregulation following transfection. Histologic analysis and immunohistochemical staining revealed TNF-alpha and ICAM-1 in transfected tumors and not in wild-type tumors. Conclusion: Highly significant in vivo tumor growth inhibition and immune protection after injection with TNF-alpha-transfected tumors appears to be mediated predominantly by CD8+ T cells and ICAM-1 upregulation. These findings suggest that TNF-alpha increases recruitment and adhesion of effector T cells.

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UNMATCHED RIGHT PARENTHESIS 'AP-1}'

The number of right parentheses in a query must be equal to the number of left parentheses.

=> file caplus biosis

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|--------------------------------------------|------------------|---------------|
| FULL ESTIMATED COST | 144.64 | 144.87 |
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L12 ANSWER 1 OF 8 CAPLUS COPYRIGHT 2011 ACS on STN

| Full Text | Citing References |
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ACCESSION NUMBER: 2004:1156439 CAPLUS
DOCUMENT NUMBER: 142:73408
TITLE: DNA vaccines comprising immunomodulatory proteins and antigen from pathogens
INVENTOR(S): Weiner, David B.; Muthumani, Karuppiiah; Kutzler, Michele; Choo, Andrew K.; Chattergoon, Michael A.
PATENT ASSIGNEE(S): The Trustees of the University of Pennsylvania, USA
SOURCE: PCT Int. Appl., 47 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

| PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------|----------|------------------------|------------|
| <u>WO 2004112706</u> | A2 | 20041229 | <u>WO 2004-US19028</u> | 20040614 |
| <u>WO 2004112706</u> | A3 | 20050414 | | |
| W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW | | | | |
| RW: BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG | | | | |
| <u>AU 2004249191</u> | A1 | 20041229 | <u>AU 2004-249191</u> | 20040614 |
| <u>AU 2004249191</u> | B2 | 20110106 | | |
| <u>CA 2529051</u> | A1 | 20041229 | <u>CA 2004-2529051</u> | 20040614 |
| <u>EP 1633372</u> | A2 | 20060315 | <u>EP 2004-755303</u> | 20040614 |
| R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, FI, RO, CY, TR, BG, CZ, EE, HU, PL, SK | | | | |
| <u>JP 2007502868</u> | T | 20070215 | <u>JP 2006-533794</u> | 20040614 |
| <u>US 20070104686</u> | A1 | 20070510 | <u>US 2004-560653</u> | 20040614 |
| PRIORITY APPLN. INFO.: | | | <u>US 2003-478187P</u> | P 20030613 |
| | | | <u>US 2003-478230P</u> | P 20030613 |
| | | | <u>US 2003-478250P</u> | P 20030613 |
| | | | <u>WO 2004-US19028</u> | W 20040614 |

ASSIGNMENT HISTORY FOR US PATENT AVAILABLE IN LSUS DISPLAY FORMAT

AB The authors disclose the use of recombinant vaccines and live attenuated pathogens comprising one or more isolated nucleic acid mols. that encode an immunogen in combination with an isolated nucleic acid mol. that encodes an immunomodulator protein selected from the group consisting of: Fos, c-jun, Sp-1, AP-1, AP-2, p38, p65Rel, MyD88, IRAK, TRAF6, IκB, inactive NIK, SAP kinase, SAP-1, JNK, interferon response genes, NF-κB, Bax, TRAIL, TRAIL receptors, Dcr5, TRAIL-R3, TRAIL-R4, RANK, RANK ligand, OX40, OX40 ligand, NKG2D, MICA, MICB, NKG2A, NKG2B, NKG2C, NKG2E, NKG2F, TAP1, TAP2 and functional fragments thereof.

OS.CITING REF COUNT: 2 THERE ARE 2 CAPLUS RECORDS THAT CITE THIS RECORD
(3 CITINGS)
REFERENCE COUNT: 1 THERE ARE 1 CITED REFERENCES AVAILABLE FOR THIS
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L12 ANSWER 2 OF 8 CAPLUS COPYRIGHT 2011 ACS on STN

| Full Text | Citing References |
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ACCESSION NUMBER: 2004:332163 CAPLUS
DOCUMENT NUMBER: 140:404155
TITLE: Extracellular ATP activates c-jun N-terminal kinase
signaling and cell cycle progression in hepatocytes
AUTHOR(S): Thevananthar, Sundararajah; Sun, Hongdan; Li, Duo;
Arjunan, Vijaya; Awad, Samir S.; Wyllie, Samuel;
Zimmerman, Tracy L.; Goss, John A.; Karpen, Saul J.
CORPORATE SOURCE: Department of Pediatrics, Section of Gastroenterology,
Hepatology and Nutrition, Baylor College of Medicine,
Houston, TX, USA
SOURCE: Hepatology (Hoboken, NJ, United States) (2004), 39(2),
393-402
CODEN: HPTLD9; ISSN: 0270-9139
PUBLISHER: John Wiley & Sons, Inc.
DOCUMENT TYPE: Journal
LANGUAGE: English

AB Partial hepatectomy leads to an orchestrated regenerative response, activating a cascade of cell signaling events necessary for cell cycle progression and proliferation of hepatocytes. However, the identity of the humoral factors that trigger the activation of these pathways in the concerted regenerative response in hepatocytes remains elusive. In recent years, extracellular ATP has emerged as a rapidly acting signaling mol. that influences a variety of liver functions, but its role in hepatocyte growth and regeneration is unknown. In this study, we sought to det. if purinergic signaling can lead to the activation of c-jun N-terminal kinase (JNK), a known central player in hepatocyte proliferation and liver regeneration. Hepatocyte treatment with ATP_γS, a nonhydrolyzable ATP analog, recapitulated early signaling events assocd. with liver regeneration-i.e., rapid and transient activation of JNK signaling, induction of immediate early genes c-fos and c-jun, and activator protein-1 (AP-1) DNA-binding activity. The rank order of agonist preference, UTP>ATP>ATP_γS, suggests that the effects of extracellular ATP is mediated through the activation of P2Y₂ receptors in hepatocytes. ATP_γS treatment alone and in combination with epidermal growth factor (EGF) substantially increased cyclin D1 and proliferating cell nuclear antigen (PCNA) protein expression and hepatocyte proliferation in vitro. Extracellular ATP as low as 10 nM was sufficient to potentiate EGF-induced cyclin D1 expression. Infusion of ATP by way of the portal vein directly activated hepatic JNK signaling, while infusion of a P2 purinergic receptor antagonist prior to partial hepatectomy inhibited JNK activation. In conclusion, extracellular ATP is a hepatic mitogen that can activate JNK signaling and hepatocyte proliferation in vitro and initiate JNK signaling in regenerating liver in vivo. These findings have implications for enhancing our understanding of novel factors involved in the initiation of regeneration, liver growth, and development.

OS.CITING REF COUNT: 42 THERE ARE 42 CAPLUS RECORDS THAT CITE THIS
RECORD (42 CITINGS)
REFERENCE COUNT: 63 THERE ARE 63 CITED REFERENCES AVAILABLE FOR THIS
RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L12 ANSWER 3 OF 8 CAPLUS COPYRIGHT 2011 ACS on STN



ACCESSION NUMBER: 2002:619468 CAPLUS
 DOCUMENT NUMBER: 137:349704
 TITLE: TAK1-dependent activation of **AP-1** and **c-Jun**
 N-terminal kinase by receptor activator of NF- κ B
 Lee, Soo Woong; Han, Sang-In; Kim, Hong-Hee; Lee, Zang
 Hee
 AUTHOR(S):
 CORPORATE SOURCE: Research Center for Proteineous Materials, School of
 Dentistry, Chosun University, Gwangju, S. Korea
 SOURCE: Journal of Biochemistry and Molecular Biology (2002),
 35(4), 371-376
 CODEN: JBMBS5; ISSN: 1225-8687
 PUBLISHER: Springer-Verlag Singapore Pte. Ltd.
 DOCUMENT TYPE: Journal
 LANGUAGE: English

AB The receptor activator of nuclear factor kappa B (**RANK**) is a member of
 the tumor necrosis factor (TNF) receptor superfamily. It plays a crit.
 role in osteoclast differentiation, lymph node organogenesis, and mammary
 gland development. The stimulation of **RANK** causes the activation of
 transcription factors NF- κ B and activator protein 1 (AP1), and the
 mitogen activated protein kinase (MAPK) c-Jun N-terminal kinase (JNK). In
 the signal transduction of **RANK**, the recruitment of the adaptor mols.,
 TNF receptor-assocd. factors (TRAFs), is an initial cytoplasmic event.
 Recently, the assocn. of the MAPK kinase kinase, transforming growth
 factor- β -activated kinase 1 (TAK1), with TRAF6 was shown to mediate
 the IL-1 signaling to NF- κ B and JNK. We investigated whether or not
 TAK1 plays a role in **RANK** signaling. A dominant-neg. form of TAK1 was
 discovered to abolish the **RANK**-induced activation of AP1 and JNK. The
 AP1 activation by TRAF2, TRAF5, and TRAF6 was also greatly suppressed by
 the dominant-neg. TAK1. The inhibitory effect of the TAK1 mutant on
RANK- and TRAF-induced NF- κ B activation was also obsd., but less
 efficiently. Our findings indicate that TAK1 is involved in the MAPK
 cascade and NF- κ B pathway that is activated by **RANK**.

OS.CITING REF COUNT: 37 THERE ARE 37 CAPLUS RECORDS THAT CITE THIS
 RECORD (37 CITINGS)
 REFERENCE COUNT: 24 THERE ARE 24 CITED REFERENCES AVAILABLE FOR THIS
 RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L12 ANSWER 4 OF 8 CAPLUS COPYRIGHT 2011 ACS on STN



ACCESSION NUMBER: 2000:893932 CAPLUS
 DOCUMENT NUMBER: 134:158047
 TITLE: Activation of c-Jun N-terminal kinase and activator
 protein 1 by receptor activator of nuclear factor
 κ B
 AUTHOR(S): Lee, Zang Hee; Kwack, Kyubum; Kim, Kyung Keun; Lee,
 Sang Ho; Kim, Hong-Hee
 CORPORATE SOURCE: Department of Microbiology and Immunology, Chosun
 University Dental School, Kwangju, S. Korea
 SOURCE: Molecular Pharmacology (2000), 58(6), 1536-1545
 CODEN: MOPMA3; ISSN: 0026-895X
 PUBLISHER: American Society for Pharmacology and Experimental
 Therapeutics
 DOCUMENT TYPE: Journal
 LANGUAGE: English

AB Receptor activator of nuclear factor κ B (**RANK**), a lately
 identified member of the tumor necrosis factor receptor superfamily, plays
 important roles both in osteoclastogenesis and in lymph node development.

Previously, the authors and others showed that **RANK** could stimulate the activity of c-Jun N-terminal kinase (JNK). In this study, the authors investigated the mechanism by which **RANK** activates JNK. The authors found that N-terminal deletion mutants of tumor necrosis factor receptor-associated factor 2 and 6 were inhibitory to **RANK** activation of JNK. The JNK activation by **RANK** was also reduced by cotransfection of kinase-inactive mutants of apoptosis signal-regulating kinase 1, MAPK/ERK kinase 1, and nuclear factor κ B-inducing kinase. In addition, dominant negative mutants of Rac and Ras decreased the **RANK** stimulation of JNK activity. Furthermore, the authors determined whether the **RANK** engagement of JNK signaling pathways could lead to the activation of the activator protein 1 (AP-1) transcription factor, one of the potential downstream targets of activated JNK. **RANK** was found to activate AP-1 in a manner dependent on the signaling molecules involved in the JNK activation by this receptor. Furthermore, the activation of JNK and ERK, but not that of p38, appeared to be involved in the AP-1 activation by **RANK**. Thus, **RANK** may use both JNK and ERK pathways to signal to the AP-1 transcription factor.

OS.CITING REF COUNT: 38 THERE ARE 38 CAPLUS RECORDS THAT CITE THIS RECORD (38 CITINGS)
 REFERENCE COUNT: 40 THERE ARE 40 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

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| ACCESSION NUMBER: | 2000:494471 CAPLUS |
| DOCUMENT NUMBER: | 133:160074 |
| TITLE: | Estrogens suppress RANK ligand-induced osteoclast differentiation via a stromal cell independent mechanism involving c-Jun repression |
| AUTHOR(S): | Shevde, Nirupama K.; Bendixen, Amy C.; Dienger, Krista M.; Pike, J. Wesley |
| CORPORATE SOURCE: | Department of Molecular and Cellular Physiology, University of Cincinnati, Cincinnati, OH, 45267, USA |
| SOURCE: | Proceedings of the National Academy of Sciences of the United States of America (2000), 97(14), 7829-7834 CODEN: PNASA6; ISSN: 0027-8424 |
| PUBLISHER: | National Academy of Sciences |
| DOCUMENT TYPE: | Journal |
| LANGUAGE: | English |
| AB | Loss of ovarian function following menopause results in a substantial increase in bone turnover and a critical imbalance between bone formation and resorption. This imbalance leads to a progressive loss of trabecular bone mass and eventually osteoporosis, in part the result of increased osteoclastogenesis. Enhanced formation of functional osteoclasts appears to be the result of increased elaboration by support cells of osteoclastogenic cytokines such as IL-1, tumor necrosis factor, and IL-6, all of which are negatively regulated by estrogens. The authors show here that estrogen can suppress receptor activator of NF- κ B ligand (RANKL) and macrophage colony-stimulating factor (M-CSF)-induced differentiation of myelomonocytic precursors into multinucleated tartrate-resistant acid phosphatase-positive osteoclasts through an estrogen receptor-dependent mechanism that does not require mediation by stromal cells. This suppression is dose-dependent, isomer-specific, and reversed by ICI 162780. Furthermore, the bone-sparing analogs tamoxifen and raloxifene mimic estrogen's effects. Estrogen blocks RANKL/M-CSF-induced activator protein-1-dependent transcription, likely through direct regulation of c-Jun activity. This effect is the result of a classical nuclear activity by estrogen receptor to regulate both c-Jun expression and its |

phosphorylation by c-Jun N-terminal kinase. The authors' results suggest that estrogen modulates osteoclast formation both by down-regulating the expression of osteoclastogenic cytokines from supportive cells and by directly suppressing RANKL-induced osteoclast differentiation.

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ACCESSION NUMBER: 2000:114343 CAPLUS
DOCUMENT NUMBER: 132:234856
TITLE: Fosl1 is a transcriptional target of c-Fos during osteoclast differentiation
AUTHOR(S): Matsuo, Koichi; Owens, Jane M.; Tonko, Martin; Elliott, Candace; Chambers, Timothy J.; Wagner, Erwin F.
CORPORATE SOURCE: Research Institute of Molecular Pathology, Vienna, Austria
SOURCE: Nature Genetics (2000), 24(2), 184-187
CODEN: NGENEC; ISSN: 1061-4036
PUBLISHER: Nature America
DOCUMENT TYPE: Journal
LANGUAGE: English

AB Osteoclasts are bone-resorbing cells derived from hematopoietic precursors of the monocyte-macrophage lineage. Mice lacking Fos (encoding c-Fos) develop osteopetrosis due to an early differentiation block in the osteoclast lineage-1-3, c-Fos is a component of the dimeric transcription factor activator protein-1 (Ap-1), which is composed mainly of Fos (c-Fos, FosB, Fra-1 and Fra-2) and Jun proteins (c-Jun, JunB and JunD). Unlike Fra-1 (encoded by Fosl1), c-Fos contains transactivation domains required for oncogenesis and cellular transformation. The mechanism by which c-Fos exerts its specific function in osteoclast differentiation is not understood. Here we show by retroviral-gene transfer that all four Fos proteins, but not the Jun proteins, rescue the differentiation block in vitro. Structure-function anal. demonstrated that the major carboxy-terminal transactivation domains of c-Fos and FosB are dispensable and that Fra-1 (which lacks transactivation domains) has the highest rescue activity. Moreover, a transgene expressing Fra-1 rescues the osteopetrosis of c-Fos-mutant mice in vivo. The osteoclast differentiation factor Rankl (also known as TRANCE, ODF and OPGL) induces transcription of Fosl1 in a c-Fos-dependent manner, thereby establishing a link between Rank signaling and the expression of Ap-1 proteins in osteoclast differentiation.

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ACCESSION NUMBER: 2004:191758 BIOSIS
DOCUMENT NUMBER: PREV200400180228
TITLE: Extracellular ATP activates c-jun N-terminal kinase signaling and cell cycle progression in hepatocytes.
AUTHOR(S): Thevananther, Sundararajah [Reprint Author]; Sun, Hongdan; Li, Duo; Arjunan, Vijaya; Awad, Samir S.; Wyllie, Samuel;

CORPORATE SOURCE: Zimmerman, Tracy L.; Goss, John A.; Karpen, Saul J.
Department of Pediatrics, Section of Gastroenterology,
Hepatology and Nutrition, Texas Children's Liver Center,
Baylor College of Medicine, One Baylor Plaza, MC 3-3391,
Houston, TX, 77030, USA
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SOURCE: Hepatology, (February 2004) Vol. 39, No. 2, pp. 393-402.
print.
ISSN: 0270-9139 (ISSN print).

DOCUMENT TYPE: Article

LANGUAGE: English

ENTRY DATE: Entered STN: 7 Apr 2004
Last Updated on STN: 7 Apr 2004

AB Partial hepatectomy leads to an orchestrated regenerative response, activating a cascade of cell signaling events necessary for cell cycle progression and proliferation of hepatocytes. However, the identity of the humoral factors that trigger the activation of these pathways in the concerted regenerative response in hepatocytes remains elusive. In recent years, extracellular ATP has emerged as a rapidly acting signaling molecule that influences a variety of liver functions, but its role in hepatocyte growth and regeneration is unknown. In this study, we sought to determine if purinergic signaling can lead to the activation of c-jun N-terminal kinase (JNK), a known central player in hepatocyte proliferation and liver regeneration. Hepatocyte treatment with ATPgammaS, a nonhydrolyzable ATP analog, recapitulated early signaling events associated with liver regeneration—that is, rapid and transient activation of JNK signaling, induction of immediate early genes c-fos and c-jun, and activator protein-1 (AP-1) DNA-binding activity. The rank order of agonist preference, UTP>ATP>ATPgammaS, suggests that the effects of extracellular ATP is mediated through the activation of P2Y2 receptors in hepatocytes. ATPgammaS treatment alone and in combination with epidermal growth factor (EGF) substantially increased cyclin D1 and proliferating cell nuclear antigen (PCNA) protein expression and hepatocyte proliferation in vitro. Extracellular ATP as low as 10 nM was sufficient to potentiate EGF-induced cyclin D1 expression. Infusion of ATP by way of the portal vein directly activated hepatic JNK signaling, while infusion of a P2 purinergic receptor antagonist prior to partial hepatectomy inhibited JNK activation. In conclusion, extracellular ATP is a hepatic mitogen that can activate JNK signaling and hepatocyte proliferation in vitro and initiate JNK signaling in regenerating liver in vivo. These findings have implications for enhancing our understanding of novel factors involved in the initiation of regeneration, liver growth, and development.

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| Full Text | Citing Reference |
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| ACCESSION NUMBER: | 2000:178964 BIOSIS |
| DOCUMENT NUMBER: | PREV200000178964 |
| TITLE: | Fosll is a transcriptional target of c-Fos during osteoclast differentiation. |
| AUTHOR(S): | Matsuo, Koichi; Owens, Jane M.; Tonko, Martin; Elliott, Candace; Chambers, Timothy J.; Wagner, Erwin F. [Reprint author] |
| CORPORATE SOURCE: | Research Institute of Molecular Pathology, Vienna, Austria |
| SOURCE: | Nature Genetics, (Feb., 2000) Vol. 24, No. 2, pp. 184-187. print. ISSN: 1061-4036. |
| DOCUMENT TYPE: | Article |
| LANGUAGE: | English |

ENTRY DATE: Entered STN: 11 May 2000
Last Updated on STN: 4 Jan 2002

AB Osteoclasts are bone-resorbing cells derived from haematopoietic precursors of the monocyte-macrophage lineage. Mice lacking Fos (encoding c-Fos) develop osteopetrosis due to an early differentiation block in the osteoclast lineage. c-Fos is a component of the dimeric transcription factor activator protein-1 (**Ap-1**), which is composed mainly of Fos (c-Fos, FosB, Fra-1 and Fra-2) and Jun proteins (**c-Jun**, JunB and JunD). Unlike Fra-1 (encoded by Fos11), c-Fos contains transactivation domains required for oncogenesis and cellular transformation. The mechanism by which c-Fos exerts its specific function in osteoclast differentiation is not understood. Here we show by retroviral-gene transfer that all four Fos proteins, but not the Jun proteins, rescue the differentiation block in vitro. Structure-function analysis demonstrated that the major carboxy-terminal transactivation domains of c-Fos and FosB are dispensable and that Fra-1 (which lacks transactivation domains) has the highest rescue activity. Moreover, a transgene expressing Fra-1 rescues the osteopetrosis of c-Fos-mutant mice in vivo. The osteoclast differentiation factor Rankl (also known as TRANCE, ODF and OPGL; refs 8-11) induces transcription of Fos11 in a c-Fos-dependent manner, thereby establishing a link between **Rank** signalling and the expression of Ap-1 proteins in osteoclast differentiation.

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